PMRA Submiss	sion Number {	}		I	EPA MRID Num	ber 48718015
Data Requirem		PMRA Data Code:	9.8.4 (T	GAI) or 9.8.6 (EP)	
		EPA DP Barcode:	402518			
		OECD Data Point:	IIA 8.12	(TGAI) and II	IA 10.8.1.1 (EP)	
		EPA Guideline:	850.415	0		
Test material:	Dicamba (BAPN	/IA salt)	Purity:	4 7 .86% w/w		
Common name			_			
Chemical name:	IUPAC					
	CAS name					
	CAS No. 1918	-00-9				
	Synonyms					
					Ja- J.S	<
Primary Review	ver: Joan Gaidos	3		Signature:		
Senior Scientist				Date: 2/13/13		
Secondary Revi	iewer: Teri S. M	vers		Signature:	au'S My	m
Senior Scientist		y 0 13		Date: 2/28/13	,	
n. n.			-	D 4 11 0 14		Digitally signed by Elizabeth Donovan
		Oonovan, Senior Scientis	st	Date: 11-2-16	O6: 1-# D	
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Reference/Subn	nission No.: {	}				
Company Code	{}	[For PMRA]				
Active Code	<i>(</i>	[For PMRA]				

Date Evaluation Completed: 11-3-2016

100094

Use Site Category: {......}

EPA PC Code

<u>CITATION</u>: Porch, J.R., H.O. Krueger, and K.H. Martin. 2011. BAPMA formulatione: A Toxicity Test to Determine the Effects on (Tier II) Vegetative Vigor of Ten Species of Plants. Unpublished study performed by Wildlife International, Ltd., Easton, Maryland. Study Project Number: 147-252. Study sponsored by BASF Corporation, Agricultural Products Division, Research Triangle Park, North Carolina. Study completed December 14, 2011.

[For PMRA]

DISCLAIMER: This document provides guidance for EPA and PMRA reviewers on how to complete a data evaluation record after reviewing a scientific study concerning the acute toxicity of a pesticide to terrestrial vascular plants. It is not intended to prescribe conditions to any external party for conducting this study nor to establish absolute criteria regarding the assessment of whether the study is scientifically sound and whether the study satisfies any applicable data requirements. Reviewers are expected to review and to determine for each study, on a case-by-case basis, whether it is scientifically sound and provides sufficient information to satisfy applicable data requirements. Studies that fail to meet any of the conditions may be accepted, if appropriate; similarly, studies that meet all of the conditions may be rejected, if appropriate. In sum, the reviewer is to take into account the totality of factors related to the test methodology and results in determining the acceptability of the study.

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EXECUTIVE SUMMARY:

The effect of **Dicamba (BAPMA salt)** on the vegetative vigor of monocot (corn, *Zea mays*, onion, *Allium cepa*; ryegrass, *Lolium perenne*; and wheat, *Triticum aestivum*) and dicot (cabbage, *Brassica oleracea*; carrot, *Daucus carota*; lettuce, *Lactuca sativa*; oilseed rape, *Brassica napus*; soybean, *Glycine max*; and tomato, *Lycopersicon esculentum*) crops was studied at nominal concentrations of 0 (negative and solvent), 0.025, 0.074, 0.22, 0.67 and 2.0 lbs ai/A (corn, onion, ryegrass and wheat); 0 (negative and solvent), 0.0027, 0.0082, 0.025, 0.074, 0.22, and 0.67 lbs ai/A (Cabbage); 0 (negative and solvent), 0.0027, 0.0082, 0.025, 0.074, and 0.22 lbs ai/A (Carrot); 0 (negative and solvent), 0.00030, 0.00091, 0.0027, 0.0082, and 0.025 lbs ai/A (Lettuce and tomato); 0 (negative and solvent), 0.00010, 0.00030, 0.00091, 0.0027, 0.0082, 0.025, 0.074, and 0.22 lbs ai/A (Soybean).

Measured test concentrations were <0.000036 (negative and solvent control), 0.0224, 0.0661, 0.2113, 0.6241, and 1.9172 lbs ai/A (corn); <0.000036 (negative and solvent control), 0.024, 0.0721, 0.2111, 0.6474 and 1.9699 lbs ai/A (Onion, ryegrass, wheat); <0.000036 (negative and solvent control), 0.0027, 0.0082, 0.024, 0.0721, 0.2111 and 0.6474 lbs ai/A (Cabbage); <0.000036 (negative and solvent control), 0.0009, 0.0026, 0.0076, 0.0224, 0.0661 and 0.2113 lbs ai/A (Carrot); <0.000036 (negative and solvent control), 0.0003, 0.0027, 0.0082, 0.024, and 0.0721 lbs ai/A (Lettuce); <0.000036 (negative and solvent control), 0.0026, 0.0076, 0.0224, 0.0661, and 0.2113 lbs ai/A (Oilseed rape); <0.000036 (negative and solvent control), 0.0001, 0.0003, 0.0009, 0.0026, 0.0082 and 0.0245 lbs ai/A (Soybean); <0.000036 (negative and solvent control), 0.0003, 0.0009, 0.0026, 0.0076, and 0.0224 lbs ai/A (Tomato).

The growth medium used in the seedling emergence test was artificial soil (sandy loam, pH 6.2, organic matter 1.2%). On day 21 the surviving plants per pot were recorded and cut at soil level for measuring the plant height and dry weight.

Survival in the negative control ranged from 90-100%; Survival in the solvent control ranged from 80-100%. There was no inhibition in survival for corn, cabbage, and soybean. Inhibitions in survival for ryegrass and wheat were a maximum of 3%. Inhibition in survival for onion, lettuce and tomato were maximums of 87, 10 and 22%, respectively. Carrot and oilseed rape had both promotion (14 and 2%) and inhibition (6 and 2%) in survival.

Inhibitions in height were maximums of 2 and 7% for ryegrass and carrot. Inhibitions in height were maximums of 13, 56, 28, 68 and 62% for corn, onion, wheat, soybean, tomato, respectively. There was a promotion in height for cabbage of 18% and promotion (9 and 2%) and inhibition (3 and 2%) in lettuce and oilseed rape, respectively. Inhibitions in dry weight ranged from maxima of 23 to 89% in all species. Maximum inhibitions were 46, 89, 23, 65, 54, 56, 37, 33, 62 and 73% for corn, onion, ryegrass, wheat, cabbage, carrot, lettuce, oilseed rape, soybean and tomato, respectively.

The most sensitive monocot species was onion based on biomass, with NOAEC and EC₂₅ values of 0.0721 and 0.0924 lb ai/A, respectively. The most sensitive dicot species was soybean based on height, with a NOAEC and EC₂₅ values of 0.0001 and 0.000826 lb ai/A, respectively.

Phytotoxic effects included adventitious growth, leaf curl, chlorosis, necrosis, and stem curl. Signs of phytotoxicity appeared dose-responsive and treatment related, increasing in severity and prevalence with an increase in treatment rate.

Maximum Labeled Rate: Not reported

Results Synopsis

Monocot

 EC₅₀/IC₅₀: 0.212 lbs ai/A
 95% C.I.: 0.139-0.323 lb ai/A

 EC₂₅/IC₂₅: 0.0924 lbs ai/A
 95% C.I.: 0.0402-0.161 lb ai/A

 EC₀₅/IC₀₅: 0.028 lbs ai/A
 95% C.I.: NA-0.0742 lb ai/A

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NOAEC: 0.0721 lbs ai/A

Slope: NA 95% C.I.: NA

Most sensitive monocot: Onion Most sensitive parameter: Biomass

Dicot

 EC50/IC50: 0.00552 lbs ai/A
 95% C.I.: 0.00485-0.00627

 EC25/IC25: 0.000826 lbs ai/A
 95% C.I.: 0.000664-0.00102

 EC05/IC05: 0.00000537 lbs ai/A
 95% C.I.: 0.0000197-0.0001

NOAEC: 0.0001 lbs ai/A

Slope: NA 95% C.I.: NA

Most sensitive dicot: Soybean Most sensitive parameter: Height

This toxicity study is classified as **acceptable** and satisfies the guideline requirement for a Tier II Vegetative Vigor toxicity study.

Table 1 (Tier II studies). Summary of most sensitive parameters by species (lbs ai/A).

Species	Endpoint	NOEC	EC ₀₅	EC25	EC50
Corn	Height	0.0661	0.0586	2.31	29.6
Onion	Biomass	0.0721	0.028	0.0924	0.212
Ryegrass	Biomass	0.0721	0.00432	2.42	197
Wheat	Height	0.0721	0.14	1.44	7.29
Cabbage	Biomass	0.024	0.0134	0.12	0.553
Carrot	Biomass	0.0076	0.00388	0.0343	0.156
Lettuce	Biomass	0.0082	0.00463	0.0162	0.0388
Oilseed Rape	Biomass	0.0661	0.0146	0.125	0.554
Soybean	Height	0.0001	0.00000537	0.000826	0.00552
Tomato	Biomass	< 0.0003	0.000922	0.00403	0.0113

I. MATERIALS AND METHODS

GUIDELINE FOLLOWED:

The methods used in conducting this study were based on procedures specified in the U.S. EPA Series 850 – Ecological Effects Test Guidelines OPPTS Number 850.4150. Deviations from OPPTS 850.4150 were noted:

- 1. The cation exchange capacity and % moisture of the soil were not reported.
- 2. The % relative humidity ranged from 12.64 to 94.80% for all species; OPPTS guidelines suggest that relative humidity range from $70 \pm 5\%$ during light periods and $90 \pm 5\%$ % during dark periods. While the study authors did not report when the humidity readings were taken, the lower values exceed light and dark recommendations.
- 3. Temperatures ranged from 16.71 to 38.44°C for all species; OPPTS guidelines suggest day temperatures of 25 ± 3 °C and night temperatures of 20 ± 3 °C. The study authors did not differentiate between day and night temperatures; however, the highest temperatures reported are higher than either the day or night recommendations.

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These deviations do not impact the acceptability of this study.

COMPLIANCE: Signed and dated GLP, Quality Assurance and Data Confidentiality

statements were provided. This study was conducted in compliance with the Good Laboratory Practice Standards as published by the U.S. Environmental Protection Agency, 40 CFR Part 160 (1989); OECD Principles of GLP (ENV/MC/CHEM (98) 17); and Japan MAFF (11 NohSan, Notification No. 6283, Agricultural Production Bureau, 1999),

with the following exception:

 Periodic analyses of well water and soil for potential contaminants were not performed in accordance with GLP standards, but were performed using a certified laboratory and standard U.S. EPA analytical methods.

A. MATERIALS:

1. Test Material BAPMA (Dicamba)

Description: Liquid

Lot No./Batch No.: 1736-90

Purity: 47.86% w/w

Stability of compound

under test conditions: Analytical verification was performed by analyzing spray mixtures from the

highest application rates, with recoveries of 86-120%.

(OECD recommends chemical stability in water and light)

Storage conditions of

test chemicals: The test material was stored under ambient conditions.

Table 2. Physical/chemical properties of Dicamba.

Parameter	Values	Comments
Water solubility at 20EC	Not reported	
Vapor pressure	Not reported	
UV absorption	Not reported	
рКа	Not reported	
Kow	Not reported	

2. Test organism:

Monocotyledonous species: Corn (*Zea mays*, Poaceae; Jarvis Golden Prolific), Onion (*Allium cepa*, Page 4 of 18

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Liliaceae; Yellow Granex Hybrid 33), Ryegrass (*Lolium perenne*, Poaceae; Gator 3 Perennial), and Wheat (*Triticum aestivum*, Poaceae; Glenn Hard Red Spring); *EPA recommends four monocots in two families, including corn.*

Dicotyledonous species: Carrot (*Daucus carota*, Apiaceae; Scarlet Nantes), Cabbage (*Brassica oleracea*, Brassicaceae; Late Flat Dutch), Lettuce (*Lactuca sativa*, Asteraceae; Summertime), Oilseed Rape (*Brassica napus*, Brassicaceae; Dwarf Essex), Soybean (*Glycine max*, Fabaceae; Maverick), and Tomato (*Lycopersicon esculentum*, Solanaceae; Rutgers); *EPA recommends six dicots in four families, including soybean and a root crop.*

OECD recommends a minimum of three species selected for testing, at least one from each of the following categories: Category 1: ryegrass, rice, oat, wheat, and sorghum; Category 2: mustard, rape, radish, turnip, and Chinese cabbage; Category 3: vetch, mung bean, red clover, fenugreek, lettuce, and cress.

Seed source: Wheat obtained from Johnny's Selected Seeds, Winslow, ME; onion obtained from Park Seed Co., Greenwood, SC; ryegrass, carrot, cabbage, and tomato obtained from The Meyer Seed Co., Baltimore, MD; lettuce obtained from Territorial Seed Co., Cottage Grove, OR; corn obtained from New Hope Seed Co., Bon Aqua, TN; Oilseed rape obtained from Seedland Inc., Wellborn, FL; and soybean obtained from Missouri Foundation Seeds, Columbia, MO.

Prior seed treatment/sterilization: Seeds were not treated with fungicides, insecticides, or repellents prior to test initiation.

Historical % germination of seed: Corn, 100%; onion, 98%; ryegrass, 90%; wheat, 94%; carrot, 80%; cabbage, 85%; lettuce, 98%; oilseed rape, 85%; soybean, 92%, and tomato, 85%.

Seed storage, if any: None reported

B. STUDY DESIGN:

1. Experimental Conditions

- a. Limit test: N/A- Conducted as a Tier II test.
- b. Range-finding study No range-finding studies were reported.
- c. Definitive Study

Table 3: Experimental Parameters – Vegetative Vigor.

Parameters	Seedling Emergence				
	Details	Remarks			
		Criteria			
Duration of the test	21days				
		Recommended test duration is 14-21 days.			
		OECD recommends that the test be terminated no sooner than 14 days after 50 percent of the control seedlings have emerged			

PMRA Submission Number {......} EPA MRID Number 48718015 Parameters Seedling Emergence **Details** Remarks Criteria Number of 5 seeds per replicate seeds/plants/species/ replicate Five plants per replicate are recommended Number of plants retained Thinning to one prior to test after thinning initiation. Number of replicates Control: 6 Adjuvant control: 6 Four replicates per dose should be used. 6 Treated: OECD recommends a minimum of four replicates per treatment Corn, onion, ryegrass and wheat: Only the lowest and highest test concentration Test concentrations Nominal: 0 (negative and solvent), 0.025, was verified. 0.074, 0.22, 0.67 and 2.0 lbs ai/A Five test concentrations should be used with a dose Cabbage: 0 (negative and solvent), range of 2X or 3X progression 0.0027, 0.0082, 0.025, 0.074, 0.22, and 0.67 lbs ai/A OECD recommends three concentrations, Oilseed rape: 0 (negative and preferably with application rates equivalent to 0.0 (control), 1.0, 10.0 and 100 mg substance per kg of solvent), 0.0027, 0.0082, 0.025, oven-dried soil. 0.074, and 0.22 lbs ai/A Carrot: 0 (negative and solvent), 0.00091, 0.0027, 0.0082, 0.025, 0.074, and 0.22 lbs ai/A Lettuce and tomato: 0 (negative and solvent), 0.00030, 0.00091, 0.0027, 0.0082, and 0.025 lbs ai/A Soybean: 0 (negative and solvent), 0.00010, 0.00030, 0.00091, 0.0027, 0.0082, 0.025, 0.074, and 0.22 lbs ai/A Corn: <0.000036 (negative and Measured: solvent control), 0.0224, 0.0661, 0.2113, 0.6241, and 1.9172 lbs ai/A Onion, ryegrass, wheat: < 0.000036 (negative and solvent control), 0.024, 0.0721, 0.2111,

0.6474 and 1.9699 lbs ai/A

Parameters	Seedling Emergence					
	Details	Remarks				
		Criteria				
	Cabbage: <0.000036 (negative and solvent control), 0.0027, 0.0082, 0.024, 0.0721, 0.2111 and 0.6474 lbs ai/A					
	Carrot: <0.000036 (negative and solvent control), 0.0009, 0.0026, 0.0076, 0.0224, 0.0661 and 0.2113 lbs ai/A					
	Lettuce: <0.000036 (negative and solvent control), 0.0003, 0.0027, 0.0082, 0.024, and 0.0721 lbs ai/A					
	Oilseed rape: <0.000036 (negative and solvent control), 0.0026, 0.0076, 0.0224, 0.0661, and 0.2113 lbs ai/A					
	Soybean: <0.000036 (negative and solvent control), 0.0001, 0.0003, 0.0009, 0.0026, 0.0082 and 0.0245 lbs ai/A					
	Tomato: <0.000036 (negative and solvent control), 0.0003, 0.0009, 0.0026, 0.076, and 0.0224 lbs ai/A					
Method and interval of analytical verification	Calibration standards were analyzed using HPLC with UV detection (235 nm)					
LOQ: LOD:	0.200 mg ai/L (0.000036 lbs ai/A) Set at the lowest analytical standard analyzed					
Adjuvant (type, percentage, if used)	Diammonium sulfate and ammonium sulfate.					
Test container (pot) Size/Volume Material: (glass/polystyrene)	11 cm diameter; 10 cm depth Plastic	N				
Grass porjourno		Non-porous containers should be used. OECD recommends that non-porous plastic or glazed pot be used.				

Parameters	Seedling Emergence					
	Details	Remarks				
		Criteria				
Growth facility	Greenhouse					
Seedling selection	Seedlings selected based on visual evaluation of similar size and condition and randomly assigned to test groups.					
Test material application Application time including the plant growth stage	Test material was applied to seedlings (2-5 leaves at application).					
Number of application	1					
Application interval	N/A; single application					
Method of application	Applied using an overhead tracksprayer equipped with a moveable spray nozzle suspended 41 cm above the soil surface.					
Details of soil used Geographic location Depth of soil collection Soil texture % sand % silt % clay pH: % organic carbon CEC Moisture at 1/3 atm (%)	N/A; artificial soil N/A Sandy loam 85 6 9 6.2 0.71% Not reported Not reported	Soil was a mixture of kaolinite clay, industrial quartz sand, and peat with limestone added. Organic matter: 1.2% Soil mixes containing sandy loam, loam, or clay loam soil with no greater than 2% organic matter are preferable. Glass beads, rock wool, and 100% acid washed sand are not preferred. OECD prefers the soil to be sieved (0.5 cm) to remove coarse fragments. Carbon content should not exceed 1.5% (3% organic matter). Fine particles (under 20um) makeup should be between 10 and 20%. The recommended pH is between 5.0 and 7.5.				
Details of nutrient medium, if used	Not reported.					
Watering regime and schedules	Well water from greenhouse.					

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Parameters	Seed	Seedling Emergence				
	Details	Remarks				
		Criteria				
Water source/type: Volume applied: Interval of application: Method of application:	Not reported. Every 1 to 4 days. The plants were bottom-watered using subirrigation trays.	EPA prefers that bottom watering be utilized for seedling emergence studies so that the chemical is not leached out of the soil during the test.				
Any pest control method/fertilization, if used	None reported					
Test conditions Temperature: Photoperiod: Light intensity and quality:	16.71-38.44°C 16L:8D Artificial lighting used to supplement natural sunlight. 12.5-28.0 PAR	EPA prefers that the cold vs warm loving plants be tested in two separate groups to optimize plant growth.				
Relative humidity:	12.64-94.80%	OECD prefers that the temperature, humidity and light conditions be suitable for maintaining normal growth of each species for the test period.				
Reference chemical (if used) Name: Concentrations:	N/A					
Other parameters, if any	None					

2. Observations:

Table 4: Observation Parameters – Vegetative Vigor.

Parameters	Seedling Emergence			
	Details	Remarks		
Parameters measured (e.g., number of germinated seeds, emerged seedlings, plant height, dry weight or other endpoints)	- Survival - Phytotoxicity - Dry weight - Height			
Measurement technique for each parameter	Survival and phytotoxicity were determined visually. Height was measured from the soil surface to the			

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	tip of the tallest leaf and shoots dried to determine dry weight.				
Observation intervals	Phytotoxicity and height were measured weekly. Survival and dry weight were determined at study termination.				
Other observations, if any	None				
Were raw data included?	Yes				
Phytotoxicity rating system, if used	0- No effect; 10-30- Slight effect; 40-60- Moderate effect; 70-90- Severe effect; 100- Complete effect	Frans, Robert E. and Ronald E. Talbert. 1977. Design of Field Experiments and the Measurement and Analysis of Plant Responses. Pages 15-23 in B. Truelove, ed. <i>Research</i> Methods in Weed Science. Southern Weed Science Society, Auburn University, Alabama.			

II. RESULTS and DISCUSSION:

A. INHIBITORY EFFECTS:

1. Vegetative Vigor:

Survival in the negative control ranged from 90-100%; Survival in the solvent control ranged from 80-100%. There was no inhibition in survival for corn, cabbage, and soybean. Inhibitions in survival for ryegrass and wheat were a maximum of 3%. Inhibition in survival for onion, lettuce and tomato were maximums of 87, 10 and 22%, respectively. Carrot and oilseed rape had both promotion (14 and 2%) and inhibition (6 and 2%) in survival.

Inhibitions in height were maximums of 2 and 7% for ryegrass and carrot. Inhibitions in height were maximums of 13, 56, 28, 68 and 62% for corn, onion, wheat, soybean, tomato, respectively. There was a promotion in height for cabbage of 18% and promotion (9 and 2%) and inhibition (3 and 2%) in lettuce and oilseed rape, respectively. Inhibitions in dry weight ranged from maximums of 23 to 89% in all species. Inhibitions were maximums of 46, 89, 23, 65, 54, 56, 37, 33, 62 and 73% for corn, onion, ryegrass, wheat, cabbage, carrot, lettuce, oilseed rape, soybean and tomato, respectively.

Based on the study authors' results, the most sensitive monocot species was onion based on dry weight, with NOAEC and EC₂₅ values of 0.074 and 0.0709 lb ai/A, respectively. The most sensitive dicot species was soybean based on dry weight, with a NOAEC and EC₂₅ values of 0.000111 and 0.000807 lb ai/A, respectively (the NOAEC was based on calculated ER₅ estimate). The study authors used nominal test concentrations for calculations of toxicity values.

Phytotoxic effects included adventitious growth, leaf curl, chlorosis, necrosis, and stem curl. Signs of phytotoxicity appeared dose-responsive and treatment related, increasing in severity and prevalence with an increase in treatment rate.

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B. REPORTED STATISTICS:

Survival, dry weight per replicate, and height data were analyzed. The LOAEC and NOAEC values were determined using Dunnett's one-tailed t-test. All statistical determinations were made with 95% certainty. Estimates of the ECx values and their confidence limits were determined using the non-linear regression analysis of Bruce and Versteeg when reductions in endpoints among one or more treatment groups were 25% or more relative to the control means. These analyses were conducted using SAS, version 8. Nominal concentrations were used for all analyses.

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Species Results summary for biomass (lbs ai/A)										
	Weight (g)	NOEC	EC ₀₅	95%CI	EC ₂₅	95%CI	EC ₅₀	95%CI	slope	Std err
Corn	3.43-6.59	0.22	NC	NC	0.584	NC	>2.0	NC	NC	NC
Onion	26-233	0.074	NC	NC	0.0709	NC	0.199	NC	NC	NC
Ryegrass	457-592	0.074	NC	NC	>2.0	NC	>2.0	NC	NC	NC
Wheat	0.42-1.27	0.074	NC	NC	0.275	NC	0.934	NC	NC	NC
Cabbage	1.51-3.46	0.025	NC	NC	0.114	NC	0.560	NC	NC	NC
Carrot	25.1-27.5	0.0082	NC	NC	0.0389	NC	0.168	NC	NC	NC
Lettuce	2.48-4.09	0.0082	NC	NC	0.0164	NC	>0.025	NC	NC	NC
Oilseed Rape	3.39-5.27	0.074	NC	NC	0.124	NC	>0.22	NC	NC	NC
Soybean	1.94-5.04	0.000111	NC	NC	0.00189	NC	0.0136	NC	NC	NC
Tomato	1.49-5.5	0.000944	NC	NC	0.00427	NC	0.0122	NC	NC	NC

Table 5a: Reported effect of BAPMA Salt on Vegetative Vigor.

Species	Results	summary	y for heig		/A)					
	Height (cm)	NOEC	EC ₀₅	95%CI	EC ₂₅	95%CI	EC ₅₀	95%CI	slope	Std err
Corn	92.9- 110.4	0.67	NC	NC	>2.0	NC	>2.0	NC	NC	NC
Onion	13.2-29.9	0.074	NC	NC	0.278	NC	1.13	NC	NC	NC
Ryegrass	24.9-25.5	2.0	NC	NC	>2.0	NC	>2.0	NC	NC	NC
Wheat	38.8-55.1	0.22	NC	NC	1.47	NC	>2.0	NC	NC	NC
Cabbage	22.9-28.5	0.67	NC	NC	>0.67	NC	>0.67	NC	NC	NC
Carrot	0.50-1.12	0.22	NC	NC	>0.22	NC	>0.22	NC	NC	NC
Lettuce	19.4-22.0	0.025	NC	NC	>0.025	NC	>0.025	NC	NC	NC
Oilseed Rape	34.3-35.8	0.22	NC	NC	>0.22	NC	>0.22	NC	NC	NC
Soybean	14.9-46.3	0.0010	NC	NC	0.000807	NC	0.00548	NC	NC	NC
Tomato	19.6-54.6	0.0027	NC	NC	0.00584	NC	0.0146	NC	NC	NC

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Table 5b: Reported effect of BAPMA Salt on Vegetative Vigor	Table 5b:	Reported effect of BAPM	A Salt on Vegetative Vigor
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Species	Results	summa	ry for su	ırvival (ll	os ai/A)					
	%	NOEC	EC ₀₅	95%CI	EC ₂₅	95%CI	EC ₅₀	95%CI	slope	Std err
Corn	100	2.0	NC	NC	>2.0	NC	>2.0	NC	NC	NC
Onion	14-100	0.22	NC	NC	0.651	NC	0.996	NC	NC	NC
Ryegrass	96-100	2.0	NC	NC	>2.0	NC	>2.0	NC	NC	NC
Wheat	96-100	2.0	NC	NC	>2.0	NC	>2.0	NC	NC	NC
Cabbage	100	0.67	NC	NC	>0.67	NC	>0.67	NC	NC	NC
Carrot	80-96	0.22	NC	NC	>0.22	NC	>0.22	NC	NC	NC
Lettuce	90-100	0.025	NC	NC	>0.025	NC	>0.025	NC	NC	NC
Oilseed Rape	96-100	0.22	NC	NC	>0.22	NC	>0.22	NC	NC	NC
Soybean	100	0.025	NC	NC	>0.025	NC	>0.025	NC	NC	NC
Tomato	76-100	0.0082	NC	NC	>0.025	NC	>0.025	NC	NC	NC

Plant In	Plant Injury Index												
Control	Corn	Onion	Ryegrass	Wheat	Cabbage	Carrot	Lettuce	Oilseed Rape	Soybean	Tomato	Adjuvant control		
0-26	0-14	0-100	0-20	0-38	0-40	0-72	0-46	0-44	0-56	0-92	0-58		

⁰⁻ No effect; 10-30- Slight effect; 40-60- Moderate effect; 70-90- Severe effect; 100- Complete effect

C. VERIFICATION OF STATISTICAL RESULTS BY THE REVIEWER:

Statistical Method(s): All analyses were conducted using the negative control only. Analysis was conducted using CETIS (version 1.8.7.4, using the backend setting created on 1/30/13). All endpoints for which replicate data were provided were examined graphically using graphs to determine if they exhibited a dose-dependent response, which was ultimately used to select the multiple comparison tests to detect the NOAEC. Data for each endpoint were tested to determine if their distributions were normal and if their variances were homogeneous using Shapiro-Wilk's and Levene's tests, respectively. Data that satisfied these assumptions were subjected to Dunnett's and William's tests and data that did not satisfy these assumptions were subjected to the non-parametric MannWhitney-U and Jonckheere's tests.

All analyses were conducted using the mean measured application rates of lbs Dicamba per acre (lbs ai/A).

PMRA Submission Number {......}

EPA MRID Number 48718015

Table 6: Effect of BAPMA Salt on Vegetative Vigor

Species	Results s	Results summary for biomass (lbs ai/A)												
	Weight (g)	NOEC	EC ₀₅	95%CI	EC ₂₅	95%CI	EC ₅₀	95%CI	slope	95%CI				
Corn	3.43-6.86	0.0224	0.027	NA-0.0774	0.364	0.221-0.567	2.22	1.33-3.7	NA	NA				
Onion	0.0257- 0.223	0.0721	0.028	NA-0.0742	0.0924	0.0402-0.161	0.212	0.139-0.323	NA	NA				
Ryegrass	0.457- 0.599	0.0721	0.00432	NA-0.0696	2.42	0.428-10.5	197	1.06-36800	NA	NA				
Wheat	0.417-1.27	0.0721	0.047	0.00467-0.089	0.272	0.191-0.372	0.922	0.756-1.12	NA	NA				
Cabbage	1.51-3.46	0.024	0.0134	0.00209-0.0279	0.12	0.0812-0.171	0.553	0.405-0.757	NA	NA				
Carrot	0.495-1.12	0.0076	0.00388	NA-0.0108	0.0343	0.018-0.0589	0.156	0.0996-0.245	NA	NA				
Lettuce	2.48-4.09	0.0082	0.00463	NA-0.00781	0.0162	0.0122-0.0207	0.0388	0.0249-0.0606	NA	NA				
Oilseed Rape	3.39-5.27	0.0661	0.0146	NA-0.038	0.125	0.0754-0.193	0.554	0.185-1.66	NA	NA				
Soybean	1.94-5.21	<0.0001	0.0000617	0.0000151- 0.000137	0.00137	0.00102-0.00181	0.0119	0.00965-0.0146	NA	NA				
Tomato	1.49-5.46	< 0.0003	0.000922	NA-0.00173	0.00404	0.00267-0.00571	0.0113	0.00898-0.0141	NA	NA				

PMRA Submission Number {......} EPA MRID Number 48718015

Table 6a: Effect of BAPMA Salt on Vegetative Vigor.

Species	Results	summary	for height (lbs ai/A)						
	Height (cm)	NOEC	EC ₀₅	95%CI	EC ₂₅	95%CI	EC ₅₀	95%CI	slope	95%CI
Corn	54-71.3	0.0661	0.0586	0.0183-0.126	2.31	1.38-3.69	29.6	7.43-118	NA	NA
Onion	13.2-29.8	0.0721	0.051	NA-0.101	0.293	0.199-0.41	0.987	0.737-1.32	NA	NA
Ryegrass	18.1-19.7	0.6474	0.908	0.201-2.22	35.1	NA-2270	444	NA	NA	NA
Wheat	38.8-54	0.0721	0.14	0.0521-0.25	1.44	1.1-1.85	7.29	3.61-14.7	NA	NA
Cabbage	22.8-28.5	0.6474	>0.6474	NA	>0.6474	NA	>0.6474	NA	NA	NA
Carrot	25.1-27.8	0.0224	0.0322	0.00289-0.127	6.76	NA-809	278	NA	NA	NA
Lettuce	19-21.4	0.024	>0.024	NA	>0.024	NA	>0.024	NA	NA	NA
Oilseed Rape	34.3-35.8	0.2113	23.3	NA	247000000	NA	188000000	NA	NA	NA
Soybean	14.9-45.9	0.0001	0.0000053 7	0.0000197- 0.0001	0.000826	0.000664- 0.00102	0.00552	0.00485- 0.00627	NA	NA
Tomato	19.5-54.6	0.0009	0.000344	NA-0.000726	0.00247	0.00161-0.0036	0.00976	0.00735-0.013	NA	NA

PMRA Submission Number {......} EPA MRID Number 48718015

Table 6b: Effect of BAPMA Salt on Vegetative Vigor.

Species	Results	summary	for surviv	al (lbs ai/A)						
	%	NOEC	EC ₀₅	95%CI	EC ₂₅	95%CI	EC ₅₀	95%CI	slope	95%CI
Com	100	1.9172	NA	NA	>1.9172	NA	>1.9172	NA	NC	NC
Onion	13.3-100	0.0721	0.285	0.15-0.405	0.574	0.402-0.737	0.934	0.727-1.22	3.19	2.12-4.26
Ryegrass	96.7-100	1.9699	>1.9699	NA	>1.9699	NA	>1.9699	NA	NA	NA
Wheat	96.7-100	1.9699	>1.9699	NA	>1.9699	NA	>1.9699	NA	NA	NA
Cabbage	100	0.6474	>0.6474	NA	>0.6474	NA	>0.6474	NA	NA	NA
Carrot	80-96.7	0.0661	0.0305	NA	0.752	NA	6.98	NA	0.697	-0.749-2.14
Lettuce	90-100	0.024	>0.024	NA	>0.024	NA	>0.024	NA	NA	NA
Oilseed Rape	96.7-100	0.0224	0.243	NA	2.9	NA	16.3	NA	0.9	0.434
Soybean	100	0.0245	>0.0245	NA	>0.0245	NA	>0.0245	NA	NA	NA
Tomato	84-100	0.0224	>0.0224	NA	>0.0224	NA	>0.0224	NA	NA	NA

PMRA Submission Number {......}

EPA MRID Number 48718015

Plant In	Plant Injury Index												
Control	Corn	Onion	Ryegrass	Wheat	Cabbage	Carrot	Lettuce	Oilseed Rape	Soybean	Tomato	Adjuvant control		
0-26	0-14	0-100	0-20	0-38	0-40	0-72	0-46	0-44	0-56	0-92	0-58		

⁰⁻ No effect; 10-30- Slight effect; 40-60- Moderate effect; 70-90- Severe effect; 100- Complete effect

Monocot

EC₅₀/IC₅₀: 0.212 lbs ai/A EC₂₅/IC₂₅: 0.0924 lbs ai/A EC₀₅/IC₀₅: 0.028 lbs ai/A 95% C.I.: 0.139-0.323 lb ai/A 95% C.I.: 0.0402-0.161 lb ai/A 95% C.I.: NA-0.0742 lb ai/A

NOAEC: 0.0721 lbs ai/A

Slope: NA 95% C.I.: NA

Most sensitive monocot: Onion Most sensitive parameter: Biomass

<u>Dicot</u>

EC₅₀/IC₅₀: 0.00552 lbs ai/A 95% C.I.: 0.00485-0.00627 EC₂₅/IC₂₅: 0.000826 lbs ai/A 95% C.I.: 0.000664-0.00102 EC₀₅/IC₀₅: 0.00000537 lbs ai/A 95% C.I.: 0.0000197-0.0001

NOAEC: 0.0001 lbs ai/A

Slope: NA 95% C.I.: NA

Most sensitive dicot: Soybean Most sensitive parameter: Height

D. STUDY DEFICIENCIES:

There were no study deficiencies.

E. REVIEWER'S COMMENTS:

The reviewer's and the study authors' results for the most sensitive monocot and dicot were similar; however the study author's identified soybean dry weight as the most sensitive endpoint while the reviewer identified soybean height. The resulting NOAEC values were similar (0.000111 vs 0.0001 lb a.i./A, respectively). The reviewer obtained 95% confidence limits for most species and endpoints, and used measured test concentrations for statistical analysis, therefore the reviewer's results are presented in the Executive Summary and Conclusions sections of this DER.

The cation exchange capacity and moisture of the soil were not reported.

The % relative humidity ranged from 20.6 to 95.1% for all species; OPPTS guidelines suggest that relative humidity range from $70 \pm 5\%$ during light periods and $90 \pm 5\%$ % during dark periods. While the study authors did not report when the humidity readings were taken, the lower values exceed light and dark recommendations.

Temperatures ranged from 17.02 to 38.97°C for all species; OPPTS guidelines suggest day temperatures of 25 ± 3 °C and night temperatures of 20 ± 3 °C. The study authors did not differentiate between day and night

PMRA Submission Number {......}

EPA MRID Number 48718015

temperatures; however, the highest temperatures reported are higher than either the day or night recommendations.

There were no effects of the adjuvant application on any species and the adjuvent was not significantly different compared to the negative controls.

The in-life portion of the test with corn, carrot, oilseed rape and tomato was conducted from August 10 to 31, 2011. The test with onion, ryegrass, wheat, cabbage, and lettuce was conducted from September 2 to 23, 2011. The test with soybean was conducted from October 12 to November 2, 2011.

F. CONCLUSIONS:

This study is **acceptable**. The most sensitive monocot species was onion based on biomass, with NOAEC and EC₂₅ values of 0.0721 and 0.0924 lbs ai/A, respectively. The most sensitive dicot was soybean, based on height, with NOAEC and EC₂₅ values of 0.0001 and 0.000826 lbs ai/A, respectively.

Most sensitive monocot and EC₂₅: Onion (biomass; 0.0924 lbs ai/A) Most sensitive dicot and EC₂₅: Soybean (height; 0.000826 lbs ai/A)

III. <u>REFERENCES</u>:

- 1. U.S. Environmental Protection Agency. 1996. Series 850 Ecological Effects Test Guidelines (*draft*), OPPTS Number 850.4150: Vegetative Vigor, Tier II.
- 2. Frans, Robert E. and Ronald E. Talbert. 1977. Design of Field Experiments and the Measurement and Analysis of Plant Responses. Pages 15-23 *in* B. Truelove, ed. Research Methods in Weed Science. Southern Weed Science Society, Auburn University, Alabama.
- 3. SAS Institute, Inc. 1999. SAS Proprietary Software Version 8, Cary, NC, SAS Institute, Inc.
- 4. Bruce, Robert D. and Donald J. Versteeg. 1992. A Statistical Procedure for Modeling Continuous Toxicity Data. *Environmental Toxicology and Chemistry*. 11: 1485-1494.

CETIS Summary Report

Report Date:

05 Feb-13 16:27 (p 1 of 2)

Test Code: 48718015 Cabbag | 18-2485-0133 OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) Wildlife International

Batch ID: 11-2230-6822 Test Type: Vegetative Vigor Tier II Analyst: OCSPP 850.4150 Plant Vegetative Vigor Diluent: Start Date: 02 Sep-11 Protocol: Ending Date: 30 Jan-13 16:47 Species: Brine: Brassica oleracea

Duration: 516d 17h Source: Meyer Seed Co., Baltimore, MD Age:

Sample ID: 15-4885-1305 Code: Client: **CDMSmith** 48718015 Project:

Sample Date: 02 Sep-11 Material: Dicamba (#1918-00-9) Receive Date: 30 Jan-13 16:47 Source: **BASF** Corporation

Sample Age: NA Station:

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
20-3042-7429	Height	0.6474	>0.6474	NA	12.1%		Dunnett Multiple Comparison Test
20-3857-8406	Height	0.6474	>0.6474	NA	9.22%		Williams Multiple Comparison Test
10-1678-6470	Survival	0.6474	>0.6474	NA	NA		Jonckheere-Terpstra Step-Down Test
02-6786-4839	Survival	0.6474	>0.6474	NA	NA		Mann-Whitney U Two-Sample Test
05-6106-2662	Weight	0.024	0.0721	0.0416	15.1%		Dunnett Multiple Comparison Test
12-5240-3798	Weight	0.024	0.0721	0.0416	11.5%		Williams Multiple Comparison Test

Point Estimate Summary

	Analysis ID	Endpoint	Level		95% LCL	95% UCL	TU	Method
Ī	20-7913-2332	Weight	IC5	0.0134	0.00209	0.0279		Nonlinear Regression
			IC10	0.0305	0.0134	0.0532		
			IC25	0.12	0.0812	0.171		
			IC50	0.553	0.405	0.757		

Height Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Solvent Blank	6	23.1	21	25.2	20.4	25.2	0.826	2.02	8.76%	0.0%
0	Negative Control	6	22.8	20.8	24.7	20.8	26	0.763	1.87	8.21%	1.44%
0.0027		6	23.3	21.8	24.8	21.4	25.4	0.586	1.43	6.17%	-0.72%
0.0082		6	23	20.2	25.9	20.4	27.8	1.1	2.7	11.7%	0.29%
0.024		6	25.7	24	27.3	24	27.6	0.638	1.56	6.09%	-11.1%
0.0721		6	26.2	24.6	27.7	24	28.2	0.596	1.46	5.58%	-13.3%
0.2111		6	28.5	25.6	31.4	24.8	33.2	1.14	2.8	9.82%	-23.4%
0.6474		6	27.2	25.4	28.9	25	29.8	0.686	1.68	6.18%	-17.6%

Survival Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Sol∨ent Blank	6	1	1	1	1	1	0	0	0.0%	0.0%
0	Negative Control	6	1	1	1	1	1	0	0	0.0%	0.0%
0.0027		6	1	1	1	1	1	0	0	0.0%	0.0%
0.0082		6	1	1	1	1	1	0	0	0.0%	0.0%
0.024		6	1	1	1	1	1	0	0	0.0%	0.0%
0.0721		6	1	1	1	1	1	0	0	0.0%	0.0%
0.2111		6	1	1	1	1	1	0	0	0.0%	0.0%
0.6474		6	1	1	1	1	1	0	0	0.0%	0.0%

Weight Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Solvent Blank	6	3.39	2.61	4.16	2.28	4.26	0.302	0.739	21.8%	0.0%
0	Negative Control	6	3.25	2.93	3.57	2.83	3.59	0.125	0.306	9.42%	4.13%
0.0027		6	3.46	3.06	3.87	2.86	3.83	0.158	0.386	11.1%	-2.16%
0.0082		6	3.08	2.57	3.59	2.42	3.84	0.199	0.488	15.9%	9.15%
0.024		6	2.89	2.7	3.09	2.56	3.07	0.0746	0.183	6.32%	14.6%
0.0721		6	2.71	2.12	3.3	2.14	3.71	0.23	0.563	20.8%	20.0%
0.2111		6	2.28	2.13	2.44	2.02	2.45	0.0613	0.15	6.58%	32.6%
0.6474		6	1.51	1.31	1.72	1.25	1.79	0.0798	0.195	12.9%	55.4%

CETIS™ v1.8.7.4 000-503-186-1 Analyst:____ QA:___

Report Date: Test Code: 05 Feb-13 16:27 (p 2 of 2)

48718015 Cabbag | 18-2485-0133

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)	
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Wildlife International

Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	20.4	23.4	20.8	24.4	25.2	24.4
0	Negative Control	22.4	22	20.8	23.8	21.6	26
0.0027		25.4	23.2	21.4	24	22	23.6
0.0082		23.6	20.8	22	23.6	20.4	27.8
0.024		27.6	24.8	25.4	24.6	24	27.6
0.0721		26.4	24	25.4	25.8	28.2	27.2
0.2111		28.6	33.2	29.2	24.8	28.4	26.8
0.6474		27	25.8	29.8	25	27.8	27.6

Survival Detail

Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	1	1	1	1	1	1
0	Negative Control	1	1	1	1	1	1
0.0027		1	1	1	1	1	1
0.0082		1	1	1	1	1	1
0.024		1	1	1	1	1	1
0.0721		1	1	1	1	1	1
0.2111		1	1	1	1	1	1
0.6474		1	1	1	1	1	1

Weight Detail

Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	2.28	3.41	2.82	3.54	4.26	4.02
0	Negative Control	2.83	3.41	3.18	3.59	2.97	3.51
0.0027		3.16	2.86	3.68	3.79	3.83	3.45
0.0082		2.87	2.91	3.4	3.03	2.42	3.84
0.024		2.56	2.98	3.02	2.86	2.88	3.07
0.0721		2.32	2.14	2.94	2.48	2.67	3.71
0.2111		2.02	2.32	2.21	2.35	2.45	2.35
0.6474		1.55	1.66	1.79	1.43	1.39	1.25

Report Date: 05 Feb-13 16:26 (p 1 of 7)

Fest Code: 48718015 Cabbag 18-2485-0	5-013
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	•							Tes	t Code:	48/18015	Cabbag 1	8-2485-013
OCSPP 850.4	150 Terrestrial Pla	ant Tier I	l (Vegeta	tive Vigor)							Wildlife Ir	iternational
Analysis ID: Analyzed:	20-3042-7429 05 Feb-13 16:25		dpoint: alysis:	Height Parametric-C	ontrol vs	Treat	ments		ΠS Version cial Result		.8.7	
Batch ID:	11-2230-6822	Te	st Type:	Vegetati∨e Vi	aor Tier II			Ana	lyst:			
Start Date:	02 Sep-11		• • •	OCSPP 850.	_		getative Vic		ient:			
Ending Date:	30 Jan-13 16:47		ecies:	Brassica oler			,	Brir				
Duration:	516d 17h	•	urce:	Meyer Seed		nore,	MD	Age				
Sample ID:	15-4885-1305	Co	de:	48718015				Clie	nt: CE	MSmith		
Sample Date:	02 Sep-11	Ma	iterial:	Dicamba (#19	918-00-9)			Pro	ject:			
	: 30 Jan-13 16:47	So	urce:	BASF Corpor	ation							
Sample Age:	NA	Sta	ation:									
Data Transfor		Zeta	Alt Hy		Seed			PMSD	NOEL	LOEL	TOEL	TU
Untransformed	<u> </u>	NA	C > T	NA	NA			12.1%	0.6474	>0.6474	NA	
Dunnett Multi	ple Comparison 1	Гest										
Control	vs Group		Test S	tat Critical	MSD	DF	P-Value	P-Type	Decision	າ(α:5%)		
Negative Contr	rol 0.0027		-0.433	2.38	2.76	10	0.9436	CDF	Non-Sigr	nificant Effect	İ	
	0.0082		-0.231	2.38	2.76	10	0.9106	CDF	_	nificant Effect		
	0.024		-2.51	2.38	2.76	10	0.9999	CDF	Non-Sigr	nificant Effect	t .	
	0.0721		-2.94	2.38	2.76	10	1.0000	CDF	Non-Sigr	nificant Effect	İ	
	0.2111		-4.96	2.38	2.76	10	1.0000	CDF	Non-Sigr	nificant Effect	İ	
	0.6474		-3.81	2.38	2.76	10	1.0000	CDF	Non-Sigr	nificant Effect	t	
ANOVA Table												
Source	Sum Squar	es	Mean	Square	DF		F Stat	P-Value	Decision	າ(α:5%)		
Between	181.5562		30.259	37	6		7.55	<0.0001	Significa	nt Effect		
Error	140.3		4.0085	572	35		_					
Total	321.8562				41							
Distributional	Toete											
	16313											
Attribute	Test			Test Sta	t Critic	al	P-Value	Decision	η(α:1%)			
		uality of \	/ariance	Test S ta	t Critic	al	P-Value 0.5813	Decision Equal Va	-			
Variances	Test	-				al		Equal Va	-			
Variances Distribution	Test Bartlett Equ Shapiro-Wi	-		4.71	16.8	al	0.5813	Equal Va	riances			
Variances Distribution Height Summ	Test Bartlett Equ Shapiro-Wi ary Control Type	lk W No		4.71 0.963	16.8 0.927 L 95 % l		0.5813 0.1954 Median	Equal Va Normal D	riances	Std Err	cv%	%Effect
Variances Distribution Height Summ Group 0	Test Bartlett Equ Shapiro-Wi	lk W No	Mean 22.8	4.71 0.963 95% LC 20.8	16.8 0.927 L 95% l 24.7		0.5813 0.1954 Median 22.2	Equal Va Normal E Min 20.8	riances Distribution Max 26	0.763	8.21%	0.0%
Variances Distribution Height Summ Group 0 0.0027	Test Bartlett Equ Shapiro-Wi ary Control Type Negative Control	lk W No	rmality Mean	4.71 0.963 95% LC	16.8 0.927 L 95 % l		0.5813 0.1954 Median	Equal Va Normal D	riances Distribution			
Variances Distribution Height Summ Group 0 0.0027	Test Bartlett Equ Shapiro-Wi ary Control Type Negative Control	Count	Mean 22.8	4.71 0.963 95% LC 20.8	16.8 0.927 L 95% l 24.7		0.5813 0.1954 Median 22.2	Equal Va Normal E Min 20.8	riances Distribution Max 26	0.763	8.21%	0.0%
Variances Distribution Height Summ Group 0 0.0027 0.0082	Test Bartlett Equ Shapiro-Wi ary Control Type Negative Control	Count	Mean 22.8 23.3	4.71 0.963 95% LC 20.8 21.8	16.8 0.927 L 95% L 24.7 24.8		0.5813 0.1954 Median 22.2 23.4	Equal Va Normal E Min 20.8 21.4	max 26 25.4	0.763 0.586	8.21% 6.17%	0.0% -2.2%
Variances Distribution Height Summ Group 0 0.0027 0.0082 0.024	Test Bartlett Equ Shapiro-Wi ary Control Type Negative Control	Count 6 6	Mean 22.8 23.3 23	95% LC 20.8 21.8 20.2	16.8 0.927 L 95% L 24.7 24.8 25.9		0.5813 0.1954 Median 22.2 23.4 22.8	Equal Va Normal E Min 20.8 21.4 20.4	riances Distribution Max 26 25.4 27.8	0.763 0.586 1.1	8.21% 6.17% 11.7%	0.0% -2.2% -1.17%
Distribution Height Summ	Test Bartlett Equ Shapiro-Wi ary Control Type Negative Control	Count 6 6 6 6	Mean 22.8 23.3 23 25.7	95% LC 20.8 21.8 20.2 24	16.8 0.927 L 95% L 24.7 24.8 25.9 27.3		0.5813 0.1954 Median 22.2 23.4 22.8 25.1	Min 20.8 21.4 20.4 24	max 26 25.4 27.8 27.6	0.763 0.586 1.1 0.638	8.21% 6.17% 11.7% 6.09%	0.0% -2.2% -1.17% -12.7%

05 Feb-13 16:26 (p 2 of 7)

Test Code: 48718015 Cabbag | 18-2485-0133

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

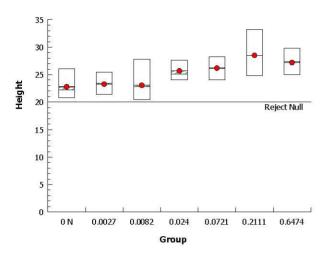
Wildlife International

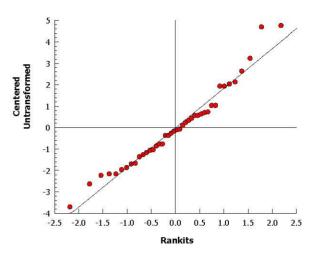
Analysis ID:	20-3042-7429	Endpoint:	Height
Analyzed:	05 Feb-13 16:25	Analysis:	Parametric-Control vs Treatments

CETIS Version: CETISv1.8.7

Official Results: Yes

Graphics





05 Feb-13 16:26 (p 3 of 7)

Test Code: 48718015 Cabbag | 18-2485-0133

										st Code:		, , , , , , , , , , , , , , , , , , ,	8-2485-013
OCSPP 850.4	150 Terrestrial Pla	nt Tier	II (Vegeta	tive Vigor)						1	Wildlife Ir	iternational
Analysis ID:	20-3857-8406	Er	ndpoint:	Height					CI	TIS Version	: CETISv1.	8.7	
Analyzed:	05 Feb-13 16:26		nalysis:	-	-Cont	rol vs (Ord.1	Treatments		ficial Result			
Batch ID:	11-2230-6822	To	et Tyne	Vegetative	Vigor	· Tier II			Δr	ıalyst:			
Start Date:	02 Sep-11		otocol:	=	_		t V/er	getative Vig		luent:			
Ending Date:	30 Jan-13 16:47		otocoi. pecies:	Brassica o			· vo	getutive vig		ine:			
Duration:	516d 17h		ource:	Meyer See			ore	MD		je:			
Daration.	3104 1711		Juice.	Wicyci Oct	,u 00.	, Daitiii	1010,	, 1010	7.6				
Sample ID:	15-4885-1305	C	ode:	48718015					CI	ient: CD	MSmith		
Sample Date:		M	aterial:	Dicamba (#1918	-00-9)			Pr	oject:			
Receive Date:	: 30 Jan-13 16:47	S	ource:	BASF Cor	poratio	on							
Sample Age:	NA	St	ation:										
Data Transfor	·m 2	Zeta	Alt H	yp Trial:	3	Seed			PMSD	NOEL	LOEL	TOEL	TU
Untransformed	1 E	NΑ	C > T	NA		NA			9.22%	0.6474	>0.6474	NA	
Williams Mult	iple Comparison ⁻	Test											
Control	vs Group		Test S	Stat Critic	al	MSD	DF	P-Value	P-Type	Decision	η(α:5%)		
Negative Cont	rol 0.0027		-0.433	1.69		1.95	10	>0.05	CDF	Non-Sigr	nificant Effect		
	0.0082		-0.231	1.77		2.04	10	>0.05	CDF	Non-Sigr	nificant Effect		
	0.024		-1.06	1.79		2.07	10	>0.05	CDF	Non-Sigr	nificant Effect		
	0.0721		-1.53	1.8		2.09	10	>0.05	CDF	Non-Sigr	nificant Effect		
	0.2111		-2.21	1.81		2.09	10	>0.05	CDF	Non-Sigr	nificant Effect		
	0.6474		-2.48	1.82		2.1	10	>0.05	CDF	Non-Sigr	nificant Effect		
ANOVA Table	1												
Source	Sum Square	es	Mean	Square		DF		F Stat	P-Value	Decision	η(α:5%)		
Between	181.5562		30.259	937		6		7.55	<0.000	l Significa	nt Effect		
Error	140.3		4.008	572		35							
Total	321.8562					41		_					
Distributional	Tests												
Attribute	Test			Test	Stat	Critica	al	P-Value	Decisio	n(α:1%)			
Variances	Bartlett Equ	ality of	Variance	4.71		16.8		0.5813	Equal \	/ariances			
Distribution				0.963		0.927		0.1954	Normal	Distribution			
	Onapho Wii												
Height Summ	· ·												
_	ary	Count	Mean	95%	LCL	95% L	ICL	Median	Min	Мах	Std Err	CV%	% Effect
Group	ary	Count		95% 20.8	LCL	95% L 24.7	ICL	Median 22.2	Min 20.8	Max 26	Std Err 0.763	CV% 8.21%	% Effect 0.0%
Group 0	Control Type Negative Control 6	Count	Mean		LCL		ICL						
Group 0 0.0027	Control Type Negative Control 6	Count	Mean 22.8	20.8	LCL	24.7	ICL	22.2	20.8	26	0.763	8.21%	0.0%
Group 0 0.0027 0.0082	Control Type Negative Control 6	Count	Mean 22.8 23.3	20.8 21.8	LCL	24.7 24.8	ICL	22.2 23.4	20.8 21.4	26 25.4	0.763 0.586	8.21% 6.17%	0.0% -2.2%
Height Summ Group 0 0.0027 0.0082 0.024 0.0721	Control Type Control 6	Count	Mean 22.8 23.3 23	20.8 21.8 20.2	LCL	24.7 24.8 25.9	ICL	22.2 23.4 22.8	20.8 21.4 20.4	26 25.4 27.8	0.763 0.586 1.1	8.21% 6.17% 11.7%	0.0% -2.2% -1.17%
Group 0 0.0027 0.0082 0.024	Control Type Control 6	Count	Mean 22.8 23.3 23 25.7	20.8 21.8 20.2 24	LCL	24.7 24.8 25.9 27.3	ICL	22.2 23.4 22.8 25.1	20.8 21.4 20.4 24	26 25.4 27.8 27.6	0.763 0.586 1.1 0.638	8.21% 6.17% 11.7% 6.09%	0.0% -2.2% -1.17% -12.7%

05 Feb-13 16:26 (p 4 of 7)

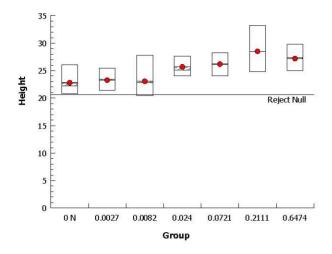
Test Code: 48718015 Cabbag | 18-2485-0133

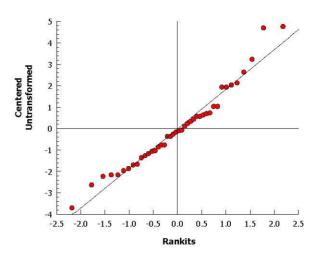
OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Wildlife International

Analysis ID:	20-3857-8406	Endpoint:	Height	CETIS Version:	CETISv1.8.7
Analyzod:	05 Eab 12 16:26	Analysis	Deremetrie Central ve Ord Treetments	Official Popultor	Voc

Graphics





05 Feb-13 16:26 (p 5 of 7)

Test Code:

48718015 Cabbag | 18-2485-0133

000000000	4450 T	-1 DI 4 TI	11 (1) (4 - 4) 1 (1
THE SPE XALL	// TALL LATERSTE	aı Piant lier	II (Vegetative Vigor

Wildlife International

Analysis ID: Analyzed:	02-6786-4839 05 Feb-13 16:25	Endpoint: Analysis:	Survival Nonparametric-Two Sample	CETIS Version: CETISv1.8.7 Official Results: Yes
Batch ID:	11-2230-6822	Test Type:	Vegetative Vigor Tier II	Analyst:
Start Date:	02 Sep-11	Protocol:	OCSPP 850.4150 Plant Vegetative Vigor	Diluent:
Ending Date:	30 Jan-13 16:47	Species:	Brassica oleracea	Brine:
Duration:	516d 17h	Source:	Meyer Seed Co., Baltimore, MD	Age:
Sample ID:	15-4885-1305	Code:	48718015	Client: CDMSmith
Sample Date:	02 Sep-11	Material:	Dicamba (#1918-00-9)	Project:
Receive Date:	30 Jan-13 16:47	Source:	BASF Corporation	
420 0 2	222	20 10		

Sample Age: NA Station:

Data Transform	Zeta	Alt Hyp	Trials	Seed	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	0.6474	>0.6474	NA	

Mann-Whitney U Two-Sample Test

Control vs	Group	Test Stat	Critical	Ties	DF P-Va	lue P-Type	Decision(α:5%)
Negative Control	0.0027	18	NA	1	10 1.000	00 Exact	Non-Significant Effect
	0.0082	18	NA	1	10 1.000	00 Exact	Non-Significant Effect
	0.024	18	NA	1	10 1.000	00 Exact	Non-Significant Effect
	0.0721	18	NA	1	10 1.000	00 Exact	Non-Significant Effect
	0.2111	18	NA	1	10 1.000	00 Exact	Non-Significant Effect
	0.6474	18	NA	1	10 1.000	0 Exact	Non-Significant Effect

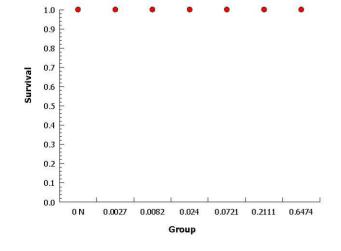
ANOVA Table

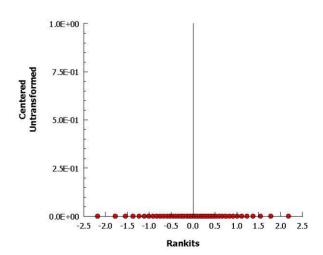
Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0	0	6	65500	<0.0001	Significant Effect
Error	0	0	35			
Total	0		41			

Survival Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	% Effect
0	Negative Control	6	1	1	1	1	1	1	0	0.0%	0.0%
0.0027		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0082		6	1	1	1	1	1	1	0	0.0%	0.0%
0.024		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0721		6	1	1	1	1	1	1	0	0.0%	0.0%
0.2111		6	1	1	1	1	1	1	0	0.0%	0.0%
0.6474		6	1	1	1	1	1	1	0	0.0%	0.0%

Graphics





000-503-186-1 CETIS™ v1.8.7.4 Analyst:_____ QA:_____

05 Feb-13 16:27 (p 6 of 7)

Test Code:

48718015 Cabbag | 18-2485-0133

OCSPP 850.4150	Terrestrial	Plant Tier	II (Veg	jetative	Vigor
OCSFF 830.4130	Tellesillai	FIGHT HELL	ıı (ve?	jetative	vigoi

Wildlife International

Analysis ID: Analyzed:	10-1678-6470 05 Feb-13 16:26	Endpoint: Analysis:	Survival Nonparametric-Control vs Ord. Treatments	CETIS Version Official Result	
Batch ID:	11-2230-6822	1.58	Vegetative Vigor Tier II	Analyst:	
Start Date:	02 Sep-11	Protocol:	OCSPP 850.4150 Plant Vegetative Vigor	Diluent:	
Ending Date:	30 Jan-13 16:47	Species:	Brassica oleracea	Brine:	
Duration:	516d 17h	Source:	Meyer Seed Co., Baltimore, MD	Age:	
Sample ID:	15-4885-1305	Code:	48718015	Client: CE	DMSmith
Sample Date:	02 Sep-11	Material:	Dicamba (#1918-00-9)	Project:	

Receive Date: 30 Jan-13 16:47 **BASF** Corporation Source:

Sample Age: NA Station:

Data Transform	Zeta	Alt Hyp	Trials	Seed	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	0.6474	>0.6474	NA	

Jonckheere-Terpstra Step-Down Test

Control vs	Group	Test Stat	Critical	Ties	DF	P-Value	P-Type	Decision(α:5%)
Negative Control	0.0027	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect
	0.0082	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect
	0.024	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect
	0.0721	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect
	0.2111	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect
	0.6474	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect

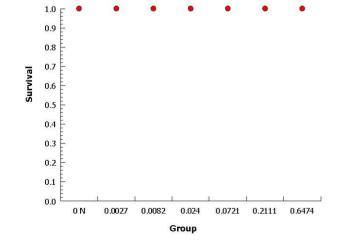
ANOVA Table

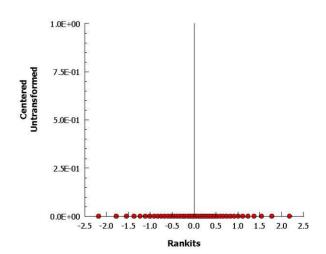
Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0	0	6	65500	<0.0001	Significant Effect
Error	0	0	35			
Total	0		41			

Survival Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	% Effect
0	Negative Control	6	1	1	1	1	1	1	0	0.0%	0.0%
0.0027		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0082		6	1	1	1	1	1	1	0	0.0%	0.0%
0.024		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0721		6	1	1	1	1	1	1	0	0.0%	0.0%
0.2111		6	1	1	1	1	1	1	0	0.0%	0.0%
0.6474		6	1	1	1	1	1	1	0	0.0%	0.0%

Graphics





CETIS™ v1.8.7.4 000-503-186-1 Analyst:____ QA:___

Report Date: 05 Feb-13 16:27 (p 7 of 7)

	* *
Test Code:	48718015 Cabbag 18-2485-0133

								163	t Coue.	407 10013	Cabbay I i	0-2403-013
OCSPP 850.4	150 Terrestrial Pi	ant Ti	er II (Veget	ative Vigor)							Wildlife Ir	iternational
Analysis ID:	05-6106-2662		Endpoint:	Weight				CE	TIS Version	n: CETISv1	.8.7	
Analyzed:	05 Feb-13 16:25		Analysis:	Parametric-Co	ntrol vs 1	Γreat	tments		icial Result			
Batch ID:	11-2230-6822		Test Tyne:	Vegetative Vig	or Tier II			Δna	alyst:			
Start Date:	02 Sep-11		Protocol:	OCSPP 850.4		t Ve	getative Vig		uent:			
Ending Date:	·	•	Species:	Brassica olera			gotativo 119	Bri				
Duration:	516d 17h		Source:	Meyer Seed C		ore	MD	Age				
-					o., Daniii	1010	,					
Sample ID:	15-4885-1305		Code:	48718015						OMSmith		
Sample Date:	•		Material:	Dicamba (#191	,			Pro	ject:			
Receive Date:	: 30 Jan-13 16:47		Source:	BASF Corpora	tion							
Sample Age:	NA		Station:									
Data Transfor		Zeta	Alt H	yp Trials	Seed			PMSD	NOEL	LOEL	TOEL	TU
Untransformed	d	NA	C > T	NA	NA			15.1%	0.024	0.0721	0.0416	
Dunnett Multi	ple Comparison	Test										
Control	vs Group		Test	Stat Critical	MSD	DF	P-Value	P-Type	Decisio	n(α:5%)		
Negative Cont	rol 0.0027		-1.04	2.38	0.491	10	0.9892	CDF	Non-Sig	nificant Effec	t	
	0.0082		0.825	2.38	0.491	10	0.5329	CDF	Non-Sig	nificant Effec	t	
	0.024		1.71	2.38	0.491	10	0.1752	CDF	Non-Sig	nificant Effec	t	
	0.0721*		2.61	2.38	0.491	10	0.0303	CDF	Significa	ant Effect		
	0.2111*		4.68	2.38	0.491		0.0001	CDF	Significa	ant Effect		
	0.6474*		8.43	2.38	0.491	10	<0.0001	CDF	Significa	ant Effect		
ANOVA Table	•											
Source	Sum Squa	res	Mean	Square	DF		F Stat	P-Value	Decisio	n(α:5%)		
Between	15.81562		2.635	937	6		20.7	<0.0001	Significa	nt Effect		
Error	4.459016		0.127	4005	35							
Total	20.27464				41							
Distributional	l Tests											
Attribute	Test			Test Stat	Critica	al	P-Value	Decisio	n(α:1%)			
Variances	Bartlett Ed	uality	of Variance	13.4	16.8		0.0368	Equal Va	ariances			
Distribution	Shapiro-W	/ilk W	Normality	0.966	0.927		0.2348	Normal I	Distribution			
Weight Sumn	nary											
Group	Control Type	Coun	nt Mean	95% LCL	95% U	ICL	Median	Min	Max	Std Err	CV%	% Effect
0	Negative Control	6	3.25	2.93	3.57		3.3	2.83	3.59	0.125	9.42%	0.0%
0.0027		6	3.46	3.06	3.87		3.57	2.86	3.83	0.158	11.1%	-6.57%
0.0082		6	3.08	2.57	3.59		2.97	2.42	3.84	0.199	15.9%	5.23%
		6	2.89	2.7	3.09		2.93	2.56	3.07	0.0746	6.32%	10.9%
0.024												
0.024 0.0721		6	2.71	2.12	3.3		2.58	2.14	3.71	0.23	20.8%	16.6%
0.024				2.12 2.13 1.31	3.3 2.44 1.72		2.58 2.34 1.49	2.14 2.02 1.25	3.71 2.45 1.79	0.23 0.0613 0.0798	20.8% 6.58% 12.9%	16.6% 29.7% 53.5%

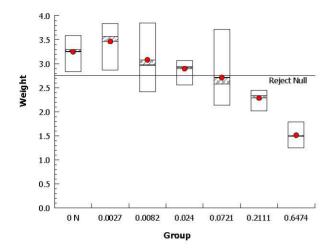
Report Date: Test Code: 05 Feb-13 16:27 (p 8 of 7) 48718015 Cabbag | 18-2485-0133

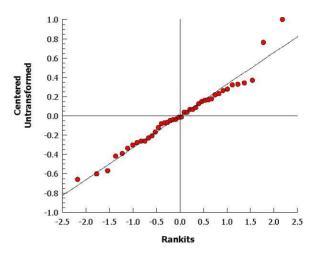
OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Wildlife International

Analysis ID:05-6106-2662Endpoint:WeightCETIS Version:CETIS V1.8.7Analyzed:05 Feb-13 16:25Analysis:Parametric-Control vs TreatmentsOfficial Results:Yes

Graphics





0.6474

CETIS Analytical Report Report Date: 05 Feb-13 16:27 (p 9 of 7) Test Code: 48718015 Cabbag | 18-2485-0133

							Test	Code:	48718015	Cabbag 1	8-2485-013	
OCSPP 850.4	4150 Terrestrial	Plant Tier	II (Vegetativ	ve Vigor)						Wildlife In	nternationa	
Analysis ID: Analyzed:	12-5240-3798 05 Feb-13 16::		ndpoint: W nalysis: Pa	eight arametric-Cor	ntrol vs Ord.	Treatments		CETIS Version: CETISv1.8.7 Official Results: Yes				
Batch ID:	11-2230-6822	Te	st Type: Ve	egetati∨e Vigo	or Tier II		Ana	lyst:				
Start Date:	02 Sep-11	Pr	otocol: O	CSPP 850.41	50 Plant Ve	getative Vig	gor Dil u	ent:				
Ending Date	: 30 Jan-13 16:4	7 S r	oecies: Br	assica olerac	ea	•	Brin	e:				
Duration:	516d 17h	Sc	ource: M	eyer Seed Co	o., Baltimore	MD Age:						
Sample ID:	15-4885-1305	Co	ode: 48	3718015			Clie	nt: CE	MSmith			
Sample Date	: 02 Sep-11	M	aterial: Di	camba (#191	8-00-9)		Proj	ect:				
Receive Date	e: 30 Jan-13 16:4	7 S c	ource: B/	ASF Corporat	ion							
Sample Age:	: NA	St	ation:									
Data Transfo		Zeta	Alt Hyp	Trials	Seed		PMSD	NOEL	LOEL	TOEL	TU	
Untransforme	ed 	NA	C > T	NA	NA		11.5% 	11.5% 0.024 0.0721 0.0410				
Williams Mu	Itiple Compariso	n Test										
Control	vs Group		Test Sta			P-Value	P-Type	Decision				
Negative Con			-1.04	1.69	0.348 10		CDF	Non-Significant Effect				
	0.0082		0.825	1.77		>0.05	CDF	_	nificant Effec			
	0.024		1.71	1.79	0.369 10		CDF	Non-Significant Effect				
	0.0721*		2.61	1.8	0.372 10		CDF	Significant Effect				
	0.2111*		4.68	1.81	0.373 10		CDF	•	nt Effect			
	0.6474*		8.43	1.82	0.374 10	<0.05	CDF	Significa	nt Effect			
ANOVA Tabl	е											
Source	Sum Squ	ares	Mean So		DF	F Stat	P-Value	Decision	` ,			
Between	15.81562		2.635937	7	6	20.7	<0.0001	Significa	nt Effect			
Error	4.459016		0.127400)5	35	_						
Total	20.27464				41							
Distributiona	al Tests											
Attribute	Test			Test Stat		P-Value	Decision	• •				
Variances		Equality of		13.4	16.8	0.0368	Equal Va					
Distribution	Shapiro-	Wilk W No	rmality	0.966	0.927	0.2348	Normal D	istribution				
Weight Sum	mary											
Group	Control Type	Count	Mean	95% LCL			Min	Max	Std Err	CV%	% Effect	
0	Negative Contro		3.25	2.93	3.57	3.3	2.83	3.59	0.125	9.42%	0.0%	
0.0027		6	3.46	3.06	3.87	3.57	2.86	3.83	0.158	11.1%	-6.57%	
0.0082		6	3.08	2.57	3.59	2.97	2.42	3.84	0.199	15.9%	5.23%	
0.024		6	2.89	2.7	3.09	2.93	2.56	3.07	0.0746	6.32%	10.9%	
0.0721		6	2.71	2.12	3.3	2.58	2.14	3.71	0.23	20.8%	16.6%	
0.2111		6	2.28	2.13	2.44	2.34	2.02	2.45	0.0613	6.58%	29.7%	
0.0474		^	4 5 4	4.04	4.70	4.40	4.05	4.70	0.0700	40.007	CO CO/	

1.31

1.72

1.49

1.25

1.79

0.0798

12.9%

53.5%

1.51

Report Date: Test Code: 05 Feb-13 16:27 (p 10 of 7) 48718015 Cabbag | 18-2485-0133

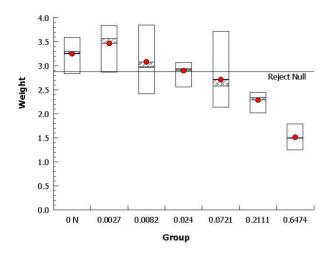
OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

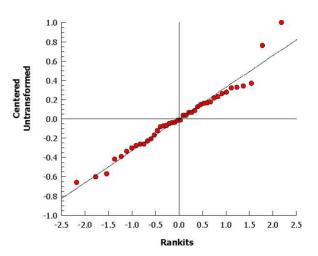
Wildlife International

Analysis ID: 12-5240-3798 Endpoint: Weight CETIS Version: CETISv1.8.7

Analyzed: 05 Feb-13 16:26 Analysis: Parametric-Control vs Ord.Treatments Official Results: Yes

Graphics





05 Feb-13 16:27 (p 1 of 2)

CEIIS	Anaiyt	ісаі керс	ort					-	Code:		ag 18-2485-0133
OCSPP	850.4150	Terrestrial F	Plant Tier II	(Vegetativ	/e Vigor)			1000			life International
Analysis Analyze		-7913-2332 Feb-13 16:2		point: W	eight onlinear Regr	ession			S Version:		
Batch ID	D: 11:	-2230-6822	Test	Type: Ve	egetative Vigo	or Tier II		Anal	vst:		
Start Da		Sep-11			CSPP 850.41		egetative Vic		-		
		Jan-13 16:4			assica olerac		ogotatiro vig	Brine			
Duration		6d 17h	Sou		eyer Seed Co		e, MD	Age:			
Cl-	ID: 45	4005 4205	0-4	40	740045			Clien	-4- 00	NAOikh	
Sample		-4885-1305	Cod		3718015 icamba (#191	0 00 0\		Clier		MSmith	
•	Date: 02	Jan-13 16:4			ASF Corporat	,		Proje	ect.		
					ASF Corporat	ION					
	Age: NA		Stat	IUII.							
Non-Lin Model F	_	ssion Optio	ns			V Trans	oform V Tra	noform \	Joiabtina E	unation	PTBS Functio
		-Normal EV	[Y=Δ*(1 ₋ Φ(log(X/D)/C	' \\1	None	sform Y Tra None		oisson [W=		Off [Y*=Y]
			[1-λ (1- Φ(10g(70D)/C	•///1	None	None	, r	0133011 [111-	.17.11	
	ion Sumr								_		
Iters	Log LL	AICc	BIC	Adj R2	Optimize		Critical	P-Value	Decision		
6	4.04	-1.45	3.13	0.7544	Yes	0.915	2.64	0.4661	Non-Sign	ificant Lack of Fit	
Point Es	stimates										
Level		95% LCL	95% UCL								
IC5	0.0134	0.00209	0.0279								
IC10	0.0305	0.0134	0.0532								
IC25	0.12	0.0812	0.171								
IC50	0.553	0.405	0.757								
Regress	ion Parar	neters									
Paramet	ter	Estimate	Std Error	95% LCI	L 95% UCL	t Stat	P-Value	Decision((α:5%)		
Α		3.29	0.11	3.08	3.51	30	<0.0001	Significan	t Paramete	r	
С		2.26	0.389	1.5	3.02	5.82	<0.0001	Significan	t Paramete	r	
D		0.553	0.0975	0.362	0.745	5.67	<0.0001	Significan	t Paramete	r	
ANOVA	Table										
Source		Sum Squ	ares Mea	n Square	DF	F Stat	P-Value	Decision((α:5%)		
Model		5.668531	5.66	8531	1	128	<0.0001	Significan	t		
Lack of F		0.163572		0893	4	0.915	0.4661	Non-Signi	ficant		
Pure Err		1.564187		4691	35						
Residual		1.727759	0.04	4302	39						
Residua	ıl Analysis	5									
Attribute		Method			Test Stat		P-Value	Decision(,		
Goodnes	ss-of-Fit		hi-Sq GOF		1.73	54.6	1.0000	_	ficant Heter		
			Ratio GOF		1.71	54.6	1.0000	-	ficant Hetei	rogenity	
Variance	es		quality of Va		11.2	12.6	0.0833	Equal Var			
Mod Levene Equality of Variance				2.37	0.2853	Equal Var					
Distributi	ion	•	/ilk W Norm Darling A2 I	-	0.98 0.231	0.947 2.49	0.6555 0.8345	Normal Di Normal Di			
Weight	Summary						alculated Va				
_	-	rol Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	% Effect	
Group 0		tive Control	6	3.25	2.83	3.59	0.125	0.306	9.42%	0.0%	
-	ivoga	LIVE CONTROL	5	5.25	2.00	5.55	0.120	0.000	J.72 /0	3.070	

Group	Control Type	Count	Mean	IVIIII	IVIAX	Stu EII	Stu Dev	C V 70	% Ellect
0	Negative Control	6	3.25	2.83	3.59	0.125	0.306	9.42%	0.0%
0.0027		6	3.46	2.86	3.83	0.158	0.386	11.1%	-6.57%
0.0082		6	3.08	2.42	3.84	0.199	0.488	15.9%	5.23%
0.024		6	2.89	2.56	3.07	0.0746	0.183	6.32%	10.9%
0.0721		6	2.71	2.14	3.71	0.23	0.563	20.8%	16.6%
0.2111		6	2.28	2.02	2.45	0.0613	0.15	6.58%	29.7%
0.6474		6	1.51	1.25	1.79	0.0798	0.195	12.9%	53.5%

05 Feb-13 16:27 (p 2 of 2)

Test Code: 48718015 Cabbag | 18-2485-0133

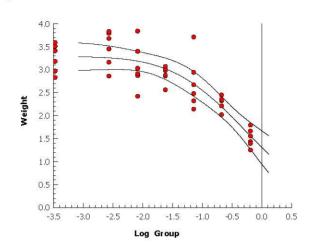
OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

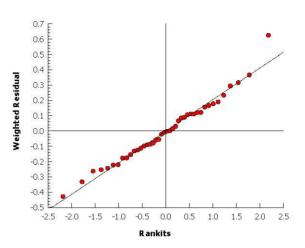
Wildlife International

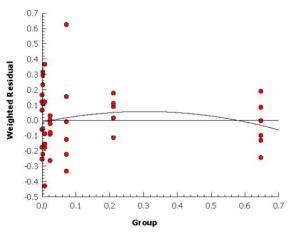
Analysis ID:20-7913-2332Endpoint:WeightCETIS Version:CETIS V1.8.7Analyzed:05 Feb-13 16:25Analysis:Nonlinear RegressionOfficial Results:Yes

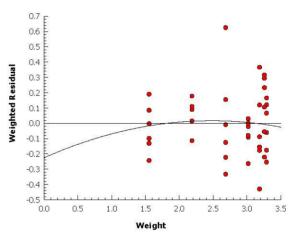
Graphics

3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]









CETIS Summary Report

Report Date:

05 Feb-13 16:34 (p 1 of 3) **Test Code:** 48718015 Carrot | 01-5851-6282

							1001 00001
OCSPP 850.41	I50 Terrestrial Plan	t Tier II (Veget	ative Vigor)				Wildlife Internation
Batch ID:	14-8940-0728	Test Type:	Vegetative Vig	or Tier II			Analyst:
Start Date:	10 Aug-11	Protocol:	OCSPP 850.4	150 Plant Ve	getative Vig	or	Diluent:
Ending Date:	30 Jan-13 17:04	Species:	Daucus carota				Brine:
Duration:	539d 17h	Source:	Meyer Seed Co	o., Baltimore	, MD		Age:
Sample ID:	15-5312-7464	Code:	48718015				Client: CDMSmith
Sample Date:	10 Aug-11	Material:	Dicamba (#191	18-00-9)			Project:
Receive Date:	30 Jan-13 17:04	Source:	BASF Corpora	tion			
Sample Age:	NA	Station:					
Comparison S	Summary						
Analysis ID	Endpoint	NOEL	. LOEL	TOEL	PMSD	TU	Method
13-9353-4378	Height	0.211	3 >0.2113	NA	10.7%		Dunnett Multiple Comparison Test
19-9772-3513	Height	0.022	4 0.0661	0.03848	8.17%		Williams Multiple Comparison Test
13-1345-2315	Survival	0.066	1 0.2113	0.1182	NA		Jonckheere-Terpstra Step-Down Test
07-6814-6150	Survival	0.211	3 >0.2113	NA	17.4%		Mann-Whitney U Two-Sample Test
19-0277-9953	Weight	0.007	6 0.0224	0.01305	22.2%		Dunnett Multiple Comparison Test
01-0412-6339	Weight	0.007	6 0.0224	0.01305	16.9%		Williams Multiple Comparison Test
Point Estimate	e Summary						
Analysis ID	Endpoint	Level		95% LCL	95% UCL	TU	Method
19-3186-4184	Height	IC5	0.0322	0.00289	0.127		Nonlinear Regression
		IC10	0.238	0.0212	1.09		
		IC25	6.76	N/A	809		
		IC50	278	N/A	N/A		
16-1377-4813	Survival	EC5	0.0305	N/A	N/A		Linear Regression (MLE)
		EC10	0.101	N/A	N/A		
		EC25		N/A	N/A		
		EC50	6.98	N/A	N/A		
14-3353-9560	Weight	IC5	0.00388	N/A	0.0108		Nonlinear Regression
		IC10	0.00878	0.00177	0.0195		
		IC25	0.0343	0.018	0.0589		
		IC50	0.156	0.0996	0.245		
		IC50	0.156	0.0996	0.245		

0.0516

0.126

15.8%

0.0%

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Test Code: 48718015 Carrot | 01-5851-6282

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)	Wildlife International
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Height Sui	nmary										
Group	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Solvent Blank	6	26.3	23.4	29.2	21.3	29.2	1.12	2.75	10.5%	0.0%
0	Negative Control	6	27.8	25.3	30.4	24	30.8	0.997	2.44	8.77%	-5.96%
0.0009		6	26.8	23.8	29.8	23.2	31.3	1.16	2.85	10.6%	-2.09%
0.0026		6	27.5	26	29	25.2	29.4	0.596	1.46	5.3%	-4.7%
0.0076		6	27.1	26	28.1	26.2	28.8	0.408	0.999	3.69%	-3.05%
0.0224		6	26.7	24.2	29.3	23.8	29.7	1	2.45	9.17%	-1.78%
0.0661		6	25.5	23.8	27.3	23	27	0.685	1.68	6.57%	2.73%
0.2113		6	25.1	22.4	27.9	22.3	29.3	1.07	2.63	10.5%	4.38%
Survival S	ummary										
Group	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Solvent Blank	6	0.8	0.612	0.988	0.6	1	0.073	0.179	22.4%	0.0%
0	Negative Control	6	0.9	0.785	1	0.8	1	0.0447	0.11	12.2%	-12.5%
0.0009		6	0.967	0.881	1	0.8	1	0.0333	0.0816	8.45%	-20.8%
0.0026		6	0.9	0.724	1	0.6	1	0.0683	0.167	18.6%	-12.5%
0.0076		6	0.9	0.785	1	0.8	1	0.0447	0.11	12.2%	-12.5%
0.0224		6	0.9	0.724	1	0.6	1	0.0683	0.167	18.6%	-12.5%
0.0661		6	0.833	0.588	1	0.4	1	0.0955	0.234	28.1%	-4.17%

Weight Summary

6

8.0

0.2113

Group	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Solvent Blank	6	1.12	0.866	1.37	0.75	1.44	0.0975	0.239	21.4%	0.0%
0	Negative Control	6	1.12	0.917	1.33	0.96	1.45	0.0795	0.195	17.4%	-0.45%
0.0009		6	0.97	0.755	1.19	0.73	1.33	0.0838	0.205	21.2%	13.1%
0.0026		6	1.12	0.923	1.32	0.76	1.3	0.0774	0.19	16.9%	-0.45%
0.0076		6	1.06	0.832	1.29	0.74	1.32	0.0892	0.218	20.6%	4.93%
0.0224		6	0.823	0.699	0.948	0.71	1.02	0.0484	0.119	14.4%	26.3%
0.0661		6	0.708	0.518	0.898	0.58	1.03	0.0739	0.181	25.6%	36.6%
0.2113		6	0.495	0.356	0.634	0.31	0.64	0.0542	0.133	26.8%	55.7%

0.933

0.6

1

0.667

Report Date: Test Code: 05 Feb-13 16:34 (p 3 of 3) 48718015 Carrot | 01-5851-6282

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor	r)
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Wildlife International

_							
Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	26.5	26.6	29.2	25.7	28.3	21.3
0	Negative Control	30.8	27.2	24	29	26.5	29.5
0.0009		31.3	23.2	26.4	25.2	28.8	26
0.0026		28	26.7	25.2	27.3	29.4	28.4
0.0076		28.8	27.2	27.5	26.4	26.3	26.2
0.0224		29.7	25.3	27.6	23.8	24.8	29.2
0.0661		27	23	27	24	25.8	26.5
0.2113		22.3	25	25.8	29.3	22.3	26

Survival Detail

Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	0.8	1	1	0.6	0.8	0.6
0	Negative Control	1	1	1	8.0	0.8	0.8
0.0009		8.0	1	1	1	1	1
0.0026		1	0.6	1	8.0	1	1
0.0076		8.0	1	8.0	1	0.8	1
0.0224		0.6	0.8	1	1	1	1
0.0661		1	0.8	1	1	0.8	0.4
0.2113		8.0	1	8.0	0.6	0.8	0.8

Weight Detail

Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	1.11	1.29	1.44	1.12	0.99	0.75
0	Negative Control	1.45	1.18	0.97	1.2	0.97	0.96
0.0009		1.33	0.73	0.92	0.9	0.88	1.06
0.0026		1.16	0.76	1.16	1.3	1.24	1.11
0.0076		1.32	0.89	1.25	1.12	1.05	0.74
0.0224		1.02	0.84	0.89	0.71	0.75	0.73
0.0661		0.59	0.58	0.62	0.61	0.82	1.03
0.2113		0.31	0.6	0.59	0.64	0.41	0.42

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	Test Code:	48718015 Carrot 01-5851-6282
OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)		Wildlife International

OCSPP 850.41	150 Terrestrial Plant	Her II (Veget	ative Vigor)		wildlife International
Analysis ID: Analyzed:	13-9353-4378 05 Feb-13 16:31	Endpoint: Analysis:	Height Parametric-Control vs Treatments	CETISv1.8.7 Yes	
Batch ID:	14-8940-0728	Test Type:	Vegetative Vigor Tier II	Analyst:	
Start Date:	10 Aug-11	Protocol:	OCSPP 850.4150 Plant Vegetative Vigor	Diluent:	
Ending Date:	30 Jan-13 17:04	Species:	Daucus carota	Brine:	
Duration:	539d 17h	Source:	Meyer Seed Co., Baltimore, MD	Age:	
Sample ID:	15-5312-7464	Code:	48718015	Client: CDM	Smith
Sample Date:	10 Aug-11	Material:	Dicamba (#1918-00-9)	Project:	
Receive Date:	30 Jan-13 17:04	Source:	BASF Corporation		
Sample Age:	NΔ	Station:			

Sample Age: NA Station:

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU	
Untransformed	NA	C > T	NA	NA	10.7%	0.2113	>0.2113	NA		

Dunnett Multiple Comparison Test

Control vs	Group	Test Stat	Critical	MSD	DF F	P-Value	P-Type	Decision(α:5%)
Negative Control	0.0009	0.812	2.38	2.99	10 0	0.5391	CDF	Non-Significant Effect
	0.0026	0.266	2.38	2.99	10 0	0.7727	CDF	Non-Significant Effect
	0.0076	0.612	2.38	2.99	10 0	0.6310	CDF	Non-Significant Effect
	0.0224	0.878	2.38	2.99	10 0	0.5080	CDF	Non-Significant Effect
	0.0661	1.82	2.38	2.99	10 0	0.1464	CDF	Non-Significant Effect
	0.2113	2.17	2.38	2.99	10 0	0.0775	CDF	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	35.34953	5.891589	6	1.25	0.3046	Non-Significant Effect
Error	164.7516	4.70719	35			
Total	200.1012		41			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	6.73	16.8	0.3469	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.987	0.927	0.9029	Normal Distribution

Height Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	% Effect
0	Negative Control	6	27.8	25.3	30.4	28.1	24	30.8	0.997	8.77%	0.0%
0.0009		6	26.8	23.8	29.8	26.2	23.2	31.3	1.16	10.6%	3.65%
0.0026		6	27.5	26	29	27.6	25.2	29.4	0.596	5.3%	1.2%
0.0076		6	27.1	26	28.1	26.8	26.2	28.8	0.408	3.69%	2.75%
0.0224		6	26.7	24.2	29.3	26.5	23.8	29.7	1	9.17%	3.95%
0.0661		6	25.5	23.8	27.3	26.1	23	27	0.685	6.57%	8.2%
0.2113		6	25.1	22.4	27.9	25.4	22.3	29.3	1.07	10.5%	9.76%

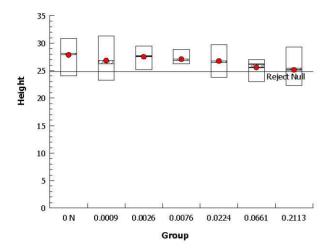
05 Feb-13 16:32 (p 2 of 7)

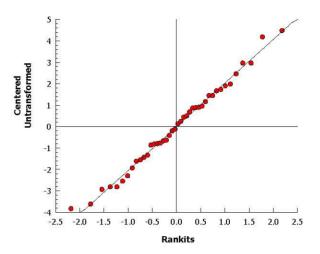
Test Code: 48718015 Carrot | 01-5851-6282

OCSPP 850.4150	Terrestrial Pla	ant Tier II (Ve	getative Vigo
OCSPP 850.4150	i Terrestriai Pi	ant Her II (Ve	getative vigo

Wildlife International

Analysis ID:13-9353-4378Endpoint:HeightCETIS Version:CETISv1.8.7Analyzed:05 Feb-13 16:31Analysis:Parametric-Control vs TreatmentsOfficial Results:Yes





0.0661

0.2113

Report Date:

05 Feb-13 16:32 (p 3 of 7)

,,	Test Code:	48718015 Carrot 01-5851-6282

								163	i Coue.	407 1001	J Carrot 0	1-303 1-020
OCSPP 850.4	150 Terrestrial	Plant T	īer II (Vegeta	tive Vigor)							Wildlife In	iternational
Analysis ID: Analyzed:	19-9772-3513 05 Feb-13 16:	32	Endpoint: Analysis:	Height Parametric-Co	ntrol vs	Ord.	Treatments	certis Version: CETISv1.8.7 official Results: Yes				
Batch ID:	14-8940-0728		Test Type:	Vegetative Vig	or Tier II	l		Ana	ılyst:			
Start Date:	10 Aug-11		Protocol:	OCSPP 850.4	150 Plan	ıt Ve	getative Vigo		ent:			
Ending Date:	30 Jan-13 17:0)4	Species:	Daucus carota	ı			Brir	ne:			
Duration:	539d 17h		Source:	Meyer Seed C		nore	, MD	Age):			
Sample ID:	15-5312-7464		Code:	48718015				Clie	ent: CD	MSmith		
Sample Date:	10 Aug-11		Material:	Dicamba (#19	18-00-9)			Pro	ject:			
Receive Date	: 30 Jan-13 17:0)4	Source:	BASF Corpora	ition							
Sample Age:	NA		Station:									
Data Transfo		Zeta			Seed			PMSD	NOEL	LOEL	TOEL	TU
Untransformed	d 	NA	C > T	NA	NA			8.17%	0.0224	0.0661	0.03848	
Williams Mult	tiple Compariso	n Test										
Control	vs Group		Test S	tat Critical	MSD	DF	P-Value	P-Type	Decision	ι(α:5%)		
Negative Cont	legative Control 0.0009		0.812	1.69	2.12	10	>0.05	CDF	Non-Sign	rificant Effec	:t	
	0.0026		0.539	1.77	2.21	10	>0.05	CDF	Non-Sign	rificant Effec	:t	
	0.0076		0.612	1.79	2.24	10	>0.05	CDF	Non-Sign	nificant Effec	:t	
	0.0224		0.878	1.8	2.26	10	>0.05	CDF	Non-Sign	nificant Effec	:t	
	0.0661*		1.82	1.81	2.27	10	<0.05	CDF	Significant Effect			
	0.2113*		2.17	1.82	2.27	10	<0.05	CDF	Significa	nt Effect		
ANOVA Table	,											
Source	Sum Sqւ	ares	Mean	Square	DF		F Stat	P-Value	Decision(α:5%)			
Between	35.34953		5.8915		6		1.25	0.3046	Non-Sign	nificant Effec	:t	
Error	164.7516		4.7071	9	35		_					
Total	200.1012				41							
Distributiona	l Tests											
Attribute	Test			Test Stat	Critic	al	P-Value	Decision	n(α:1%)			
Variances	Bartlett B	Equality	of Variance	6.73	16.8		0.3469	Equal Va	riances			
Distribution	Shapiro-	Wilk W	Normality	0.987	0.927		0.9029	Normal [Distribution			
Height Summ	nary											
Group	Control Type	Cou	nt Mean	95% LCL	95% เ	JCL	Median	Min	Max	Std Err	CV%	% Effect
0	Negative Contro	ol 6	27.8	25.3	30.4		28.1	24	30.8	0.997	8.77%	0.0%
0.0009		6	26.8	23.8	29.8		26.2	23.2	31.3	1.16	10.6%	3.65%
0.0026		6	27.5	26	29		27.6	25.2	29.4	0.596	5.3%	1.2%
0.0076		6	27.1	26	28.1		26.8	26.2	28.8	0.408	3.69%	2.75%
0.0224		6	26.7	24.2	29.3		26.5	23.8	29.7	1	9.17%	3.95%
0.0004		_					00.4			0.005	0.570	0.001

23.8

22.4

27.3

27.9

26.1

25.4

23

22.3

27

29.3

0.685

1.07

6.57%

10.5%

8.2%

9.76%

25.5

25.1

6

6

05 Feb-13 16:32 (p 4 of 7)

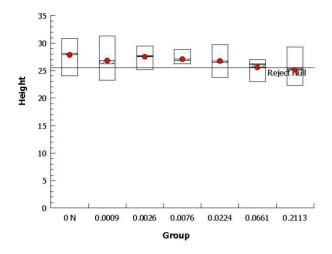
Test Code:

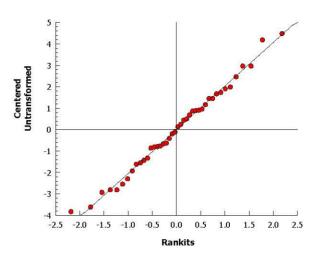
48718015 Carrot | 01-5851-6282

OCSPP 850.4150 Terrestrial Plant Tier II (Vegeta	live Vigor)	į
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Wildlife International

Analysis ID:19-9772-3513Endpoint:HeightCETIS Version:CETISv1.8.7Analyzed:05 Feb-13 16:32Analysis:Parametric-Control vs Ord.TreatmentsOfficial Results:Yes





0.0009

0.0026

0.0076

0.0224

0.0661

0.2113

6

6

6

6

6

6

0.967

0.9

0.9

0.9

0.8

0.833

0.881

0.724

0.785

0.724

0.588

0.667

1

1

1

1

1

0.933

1

1

0.9

1

0.9

0.8

0.8

0.6

0.8

0.6

0.4

0.6

1

1

1

1

1

1

0.0333

0.0683

0.0447

0.0683

0.0955

0.0516

8.45%

18.6%

12.2%

18.6%

28.1%

15.8%

-7.41%

0.0%

0.0%

0.0%

7.41%

11.1%

Report Date:

05 Feb-13 16:32 (p 5 of 7)

CE IIS Ana	llytic	аі керс	rτ								st Code:			01-5851-628
OCSPP 850.41	150 T	errestrial P	lant T	ier II (Veget	ative	Vigor)				16	st Code.	407 1001	•	nternationa
Analysis ID:	07-6	814-6150		Endpoint:	Sur	√i∨al				CE	TIS Version:	CETISv1	.8.7	
Analyzed:	05 F	eb-13 16:3	1	Analysis:	Non	parametric-	Two Sa	mple	•	Of	ficial Results	: Yes		
Batch ID:	14-8	940-0728		Test Type:	Veg	etative Vigo	r Tier II			An	alyst:			
Start Date:	10 A	ug-11		Protocol:	oc:	SPP 850.41	50 Plan	t Ve	getative Vig	or Dil	uent:			
Ending Date:	30 J	an-13 17:04	4	Species:	Dau	cus carota				Br	ine:			
Duration:	5390	d 17h		Source:	Mey	er Seed Co	o., Baltir	nore,	, MD	Ag	e:			
Sample ID:	15-5	312-7464		Code:	487	18015				Cli	ent: CD	MSmith		
Sample Date:	10 A	ug-11		Material:	Dica	amba (#191	8-00-9)			Pre	oject:			
Receive Date:	: 30 J	an-13 17:04	4	Source:	BAS	SF Corporat	ion							
Sample Age:	NA			Station:										
Data Transfor	m		Zeta	Alt I	lyp	Trials	Seed			PMSD	NOEL	LOEL	TOEL	TU
Untransformed	t		NA	C > 1	-	NA	NA			17.4%	0.2113	>0.2113	NA	
Mann-Whitney	y U T	wo-Sample	Test											
Control	vs	Group		Test	Stat	Critical	Ties	DF	P-Value	P-Type	Decision	(α:5%)		
Negative Contr	rol	0.0009		12		NA	2	10	0.9697	Exact	Non-Sign	ificant Effec	t	
		0.0026		16.5		NA	2	10	0.6515	Exact	Non-Sign	ificant Effec	t	
		0.0076		18		NA	2	10	0.7165	Exact	Non-Sign	ificant Effec	t	
		0.0224		16.5		NA	2	10	0.6515	Exact	Non-Sign	ificant Effec	t	
		0.0661		19.5		NA	2	10	0.5000	Exact	Non-Sign	ificant Effec	t	
		0.2113		25.5		NA	2	10	0.1818	Exact	Non-Sign	ificant Effec	t	
ANOVA Table														
Source		Sum Squa	ares	Mear	squ	are	DF		F Stat	P-Value	Decision	(α:5%)		
Between		0.1047619		0.017	4603	2	6		0.777	0.5936	Non-Sign	ificant Effec	t	
Error		0.7866667		0.022	24761	9	35		_					
Total		0.8914286					41							
Distributional	Test	S												
Attribute		Test				Test Stat	Critic	al	P-Value	Decisio	n(α:1%)			
Variances		Bartlett E	quality	of Variance		6.89	16.8		0.3316	Equal V	ariances			
Distribution		Shapiro-V	Vilk W	Normality		0.888	0.927		0.0006	Non-noi	mal Distribut	on		
Survival Sumi	mary													
Group	Cont	rol Type	Cou	nt Mear	1	95% LCL	95% เ	JCL	Median	Min	Max	Std Err	CV%	% Effect
0	Nega	tive Contro	16	0.9		0.785	1		0.9	0.8	1	0.0447	12.2%	0.0%
0.0000				0 00-	7	0.004	a i		4			0.0000	0.4501	7 4401

05 Feb-13 16:32 (p 6 of 7)

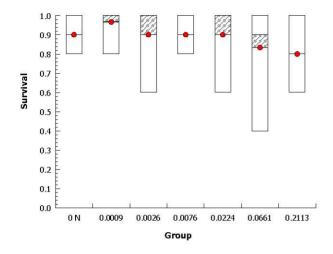
Test Code:

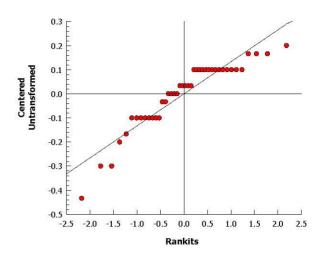
48718015 Carrot | 01-5851-6282

OCSPP 850.4150 Terre	estrial Plant	Tier II (V	egetative	Vigor)
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Wildlife International

Analysis ID:07-6814-6150Endpoint:SurvivalCETIS Version:CETISv1.8.7Analyzed:05 Feb-13 16:31Analysis:Nonparametric-Two SampleOfficial Results:Yes





CETIS Analytical Report	Report Date: Test Code:	05 Feb-13 16:32 (p 7 of 7) 48718015 Carrot 01-5851-6282
OCSPP 850 4150 Terrestrial Plant Tier II (Vegetative Vigor)		Wildlife International

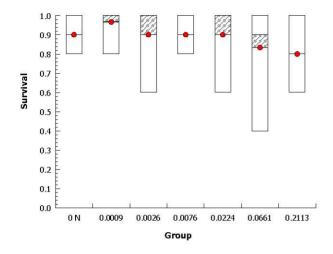
									est Code:			1-5851-628
OCSPP 850.4	150 Terrestrial Plan	t Tier II (V	egetative	e Vigor)							Wildlife In	ternational
Analysis ID:	13-1345-2315	Endpo	int: Su	rvival					ETIS Versio	n: CETISv1	.8.7	
Analyzed:	05 Feb-13 16:32	Analys	sis: No	nparametric-	Control	vs C	ord. Treatm	ents C	official Resul	ts: Yes		
Batch ID:	14-8940-0728	Test T	vpe: Ve	getative Vigo	r Tier II			Δ	nalyst:			
Start Date:	10 Aug-11	Protoc		SPP 850.41		t Ved	getative Vic		iluent:			
Ending Date:	30 Jan-13 17:04	Specie		ucus carota			J		Brine:			
Duration:	539d 17h	Source		yer Seed Co	Baltin	ore	MD	_	ge:			
					., ==	,						
Sample ID:	15-5312-7464	Code:		718015						DMSmith		
Sample Date:	-	Materi		amba (#191	,			P	roject:			
	: 30 Jan-13 17:04	Sourc		SF Corporati	ion							
Sample Age:	NA	Statio	n:									
Data Transfor	m Ze	ta /	Alt Hyp	Trials	Seed				NOEL	LOEL	TOEL	TU
Untransformed	d N	4 (C > T	NA	NA				0.0661	0.2113	0.1182	
Jonckheere-T	erpstra Step-Down	Test										
Control	vs Group	1	Test Stat	Critical	Ties	DF	P-Value	Р-Тур	e Decisio	on(α:5%)		
Negative Conti	rol 0.0009	-	1.32	1.64	2	-2	0.9070	Asymp	Non-Sig	nificant Effect		
	0.0026	-	0.409	1.64	2	-2	0.6586	Asymp	o Non-Sig	gnificant Effect	t	
	0.0076	(0.217	1.64	2	-2	0.4306	Asymp	Non-Sig	gnificant Effect	t	
	0.0224	(0.175	1.64	3	-2	0.4306	Asymp	o Non-Sig	gnificant Effect	İ	
	0.0661	(0.633	1.64	3	-2	0.2634	Asymp	,	gnificant Effect	İ	
	0.2113*	1	1.65	1.64	3	-2	0.0491	Asymp	Signific	ant Effect		
ANOVA Table	1											
Source	Sum Squares	; "	Mean Sq	uare	DF		F Stat	P-Valu	ie Decisio	ın(α:5%)		
Between	0.1047619	(0.0174603	32	6		0.777	0.5936	Non-Sig	nificant Effect		
Error	0.7866667	(0.022476	19	35		_					
Total	0.8914286				41							
					71							
Distributional	Tests											
	Tests Test			Test Stat		al	P-Value	Decisi	on(α:1%)			
Attribute		lity of Varia	ance	Test Stat		al	P-Value 0.3316		ion(α:1%) Variances			
Attribute Variances	Test	-			Critica	al		Equal		ution		
Attribute Variances Distribution	Test Bartlett Equa Shapiro-Wilk	-		6.89	Critica 16.8	al	0.3316	Equal	Variances	ution		
Attribute Variances Distribution Survival Sumi	Test Bartlett Equa Shapiro-Wilk mary	W Normal		6.89	Critica 16.8 0.927		0.3316 0.0006	Equal	Variances	ution Std Err	CV%	%Effect
Attribute Variances Distribution Survival Summ	Test Bartlett Equa Shapiro-Wilk mary	W Normal	lity	6.89 0.888	Critica 16.8 0.927		0.3316 0.0006	Equal Non-n	Variances ormal Distrib		CV% 12.2%	% Effect 0.0%
Attribute Variances Distribution Survival Summer Group	Test Bartlett Equa Shapiro-Wilk mary Control Type Co	W Normal	lity Vlean	6.89 0.888 95% LCL	Critica 16.8 0.927		0.3316 0.0006 Median	Equal Non-n Min	Variances ormal Distrib	Std Err		
Attribute Variances Distribution Survival Summ Group 0 0.0009	Test Bartlett Equa Shapiro-Wilk mary Control Type Co Negative Control 6	W Normal	Mean 0.9	6.89 0.888 95% LCL 0.785	Critica 16.8 0.927 95% U		0.3316 0.0006 Median 0.9	Equal Non-n Min 0.8	Variances ormal Distrib	Std Err 0.0447	12.2%	0.0%
Attribute Variances Distribution Survival Sumi Group 0 0.0009 0.0026	Test Bartlett Equa Shapiro-Wilk mary Control Type Co Negative Control 6 6	W Normal	Viean 0.9 0.967	6.89 0.888 95% LCL 0.785 0.881	Critica 16.8 0.927 95% U		0.3316 0.0006 Median 0.9	Equal Non-n Min 0.8 0.8	Variances ormal Distribu Max 1	Std Err 0.0447 0.0333	12.2% 8.45%	0.0% -7.41%
Attribute Variances Distribution Survival Sumi Group 0 0.0009 0.0026 0.0076	Test Bartlett Equa Shapiro-Wilk mary Control Type Co Negative Control 6 6 6	W Normal	Mean 0.9 0.967 0.9	6.89 0.888 95% LCL 0.785 0.881 0.724	95% U		0.3316 0.0006 Median 0.9 1	Equal Non-n Min 0.8 0.8 0.6	Variances ormal Distribu Max 1 1	Std Err 0.0447 0.0333 0.0683	12.2% 8.45% 18.6%	0.0% -7.41% 0.0%
Distributional Attribute Variances Distribution Survival Sumi Group 0 0.0009 0.0026 0.0076 0.0224 0.0661	Test Bartlett Equa Shapiro-Wilk mary Control Type Co Negative Control 6 6 6 6 6	Dunt [Mean 0.9 0.967 0.9	6.89 0.888 95% LCL 0.785 0.881 0.724 0.785	95% U		0.3316 0.0006 Median 0.9 1 1 0.9	Equal Non-n Min 0.8 0.8 0.6 0.8	Variances ormal Distribution Max 1 1 1 1	Std Err 0.0447 0.0333 0.0683 0.0447	12.2% 8.45% 18.6% 12.2%	0.0% -7.41% 0.0% 0.0%

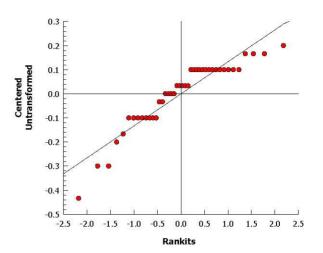
05 Feb-13 16:32 (p 8 of 7) 48718015 Carrot | 01-5851-6282

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Wildlife International

Analysis ID:	13-1345-2315	Endpoint:	Survival	CETIS Version:	CETISv1.8.7
Analyzed:	05 Feb-13 16:32	Analysis:	Nonparametric-Control vs Ord. Treatments	Official Results:	Yes





0.0224

0.0661

0.2113

6

6

6

0.823

0.708

0.495

0.699

0.518

0.356

0.948

0.898

0.634

0.795

0.615

0.505

0.71

0.58

0.31

1.02

1.03

0.64

0.0484

0.0739

0.0542

14.4%

25.6%

26.8%

26.6%

36.8%

55.9%

Report Date:

05 Feb-13 16:33 (p 9 of 7)

 Test Code:	48718015 Carrot 01-5851-6282
	34711115 1 4 41 1

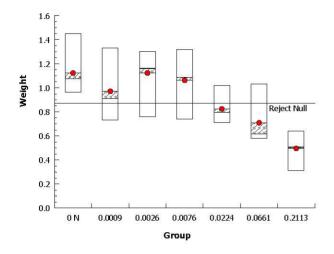
												o. • o a o .	101 1001	0 0000 0	
OCSPP 850.4	4150 T	errestrial F	Plant T	Tier II (Vegeta	tive	Vigor)							Wildlife In	nternationa
Analysis ID: Analyzed:)277-9953 Feb-13 16:3	31	Endp Analy			Weight Parametric-Control ∨s Treatments					TIS Version		1.8.7	
Batch ID:		3940-0728							1001	inonto					
							etative Vigo		. \ / ~ .	getati∨e Vig		alyst:			
Start Date:		lug-11	4	Proto				50 Piaili	. ve	getative vigi		luent:			
Ending Date		an-13 17:0	4	Spec			cus carota	D = 14:		МБ		ine:			
Duration:	5390	d 17h		Sour	ce:	iviey	er Seed Co	o., Baitim	ore,	, MD	Ag	je: 			
Sample ID:	15-5	312-7464		Code	:	487	18015				Cli	ient: CD	MSmith		
Sample Date	e: 10 A	ug-11		Mate	rial:	Dica	amba (#191	8-00-9)			Project:				
Receive Date	e: 30 J	an-13 17:0	4	Sour	ce:	BAS	F Corporat	ion							
Sample Age:	: NA			Statio	on:										
Data Transfo	orm		Zeta	l	Alt Hy	/p	Trials	Seed			PMSD	NOEL	LOEL	TOEL	TU
Untransforme	ed		NA		C > T		NA	NA			22.2%	0.0076	0.0224	0.01305	
Dunnett Mult	tiple C	omparison	ı Test												
Control	vs	Group			Test S	tat	Critical	MSD	DF	P-Value	P-Type	Decision	ι(α:5%)		
Negative Con	ntrol	0.0009			1.45		2.38	0.248	10	0.2597	CDF	Non-Sign	nificant Effec	t	
		0.0026			2.86E-	07	2.38	0.248	10	0.8571	CDF	Non-Sign	nificant Effec	t	
		0.0076			0.576		2.38	0.248	10	0.6472	CDF	Non-Sigr	rificant Effec	t	
		0.0224*			2.86		2.38			0.0170	CDF	Significa			
		0.0661*			3.97		2.38			0.0009	CDF	Significa			
		0.2113*			6.01		2.38	0.248	10	<0.0001	CDF	Significa	nt Effect		
ANOVA Tabl	е														
Source		Sum Squa	ares		Mean	Squ	are	DF		F Stat	P-Value	e Decision	η(α:5%)		
Between		2.015681			0.3359	468		6		10.3	< 0.0001	l Significar	nt Effect		
Error		1.141017			0.0326	004	8	35		_					
Total		3.156698						41							
Distributiona	al Test	S													
Attribute		Test					Test Stat	Critica	ıl	P-Value		n(α:1%)			
Variances Bartlett Equality of Variance				2.62	16.8		0.8551		'ariances						
Distribution		Shapiro-V	/Vilk ₩	Norma	ality		0.98	0.927		0.6778	Normal	Distribution			
Weight Sum	mary														
Group		rol Type	Cou	nt	Mean		95% LCL	95% U	CL	Median	Min	Max	Std Err	CV%	% Effect
0	Nega	ative Contro			1.12		0.917	1.33		1.08	0.96	1.45	0.0795	17.4%	0.0%
0.0009			6		0.97		0.755	1.19		0.91	0.73	1.33	0.0838	21.2%	13.5%
0.0026			6		1.12		0.923	1.32		1.16	0.76	1.3	0.0774	16.9%	0.0%
0.0076			6		1.06		0.832	1.29		1.09	0.74	1.32	0.0892	20.6%	5.35%

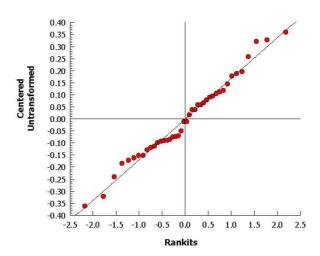
05 Feb-13 16:33 (p 10 of 7) 48718015 Carrot | 01-5851-6282

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Wildlife International

Analysis ID:19-0277-9953Endpoint:WeightCETIS Version:CETIS V1.8.7Analyzed:05 Feb-13 16:31Analysis:Parametric-Control vs TreatmentsOfficial Results:Yes





05 Feb-13 16:33 (p 11 of 7) 48718015 Carrot | 01-5851-6282

OCSPP 850.4	Wildlife International				
Analysis ID: Analyzed:	01-0412-6339 05 Feb-13 16:32	Endpoint: Analysis:	Weight Parametric-Control vs Ord.Treatments	CETIS Version: Official Results:	CETISv1.8.7 Yes
Batch ID:	14-8940-0728	Test Type:	Vegetative Vigor Tier II	Analyst:	
Start Date:	10 Aug-11	Protocol:	OCSPP 850.4150 Plant Vegetative Vigor	Diluent:	
Ending Date:	30 Jan-13 17:04	Species:	Daucus carota	Brine:	
Duration:	539d 17h	Source:	Meyer Seed Co., Baltimore, MD	Age:	
0I- ID-	45 5040 7404	0-4	40740045	OU 4: ODM	10 ith

 Sample ID:
 15-5312-7464
 Code:
 48718015
 Client:
 CDMSmith

 Sample Date:
 10 Aug-11
 Material:
 Dicamba (#1918-00-9)
 Project:

Receive Date: 30 Jan-13 17:04 Source: BASF Corporation

Sample Age: NA Station:

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU	
Untransformed	NA	C > T	NA	NA	16.9%	0.0076	0.0224	0.01305		

Williams Multiple Comparison Test

Control vs	Group	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control	0.0009	1.45	1.69	0.176	10	>0.05	CDF	Non-Significant Effect
	0.0026	0.727	1.77	0.184	10	>0.05	CDF	Non-Significant Effect
	0.0076	0.677	1.79	0.187	10	>0.05	CDF	Non-Significant Effect
	0.0224*	2.86	1.8	0.188	10	<0.05	CDF	Significant Effect
	0.0661*	3.97	1.81	0.189	10	<0.05	CDF	Significant Effect
	0.2113*	6.01	1.82	0.189	10	<0.05	CDF	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	2.015681	0.3359468	6	10.3	<0.0001	Significant Effect
Error	1.141017	0.03260048	35			
Total	3.156698		41			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	2.62	16.8	0.8551	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.98	0.927	0.6778	Normal Distribution

Weight Summary

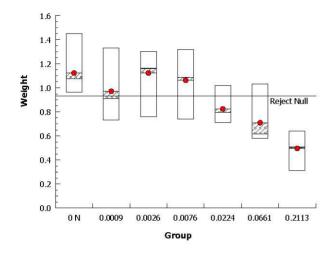
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	% Effect
0	Negative Control	6	1.12	0.917	1.33	1.08	0.96	1.45	0.0795	17.4%	0.0%
0.0009		6	0.97	0.755	1.19	0.91	0.73	1.33	0.0838	21.2%	13.5%
0.0026		6	1.12	0.923	1.32	1.16	0.76	1.3	0.0774	16.9%	0.0%
0.0076		6	1.06	0.832	1.29	1.09	0.74	1.32	0.0892	20.6%	5.35%
0.0224		6	0.823	0.699	0.948	0.795	0.71	1.02	0.0484	14.4%	26.6%
0.0661		6	0.708	0.518	0.898	0.615	0.58	1.03	0.0739	25.6%	36.8%
0.2113		6	0.495	0.356	0.634	0.505	0.31	0.64	0.0542	26.8%	55.9%

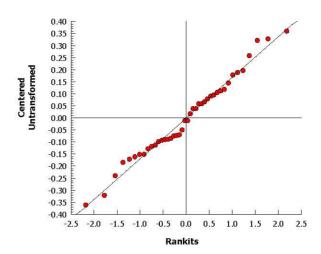
05 Feb-13 16:33 (p 12 of 7) 48718015 Carrot | 01-5851-6282

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Wildlife International

Analysis ID:01-0412-6339Endpoint:WeightCETIS Version:CETIS V1.8.7Analyzed:05 Feb-13 16:32Analysis:Parametric-Control vs Ord.TreatmentsOfficial Results:Yes





Report Date: 05 Feb-13 16:33 (p 1 of 2) Test Code:

48718015 Carrot | 01-5851-6282

OCCDB 050												
UCOFF 830	0.4150 Terrestri	al Plant	Пег II (Ve	egetativ	e Vigor)						Wildlife	Internation
Analysis ID): 16-1377-48	13	Endpoi	int: Su	rvival			CET	IS Version:	CETISv1	.8.7	
nalyzed:	05 Feb-13		Analysi		ear Regress	ion (MLE)			ial Results:			
Batch ID:	14-8940-07	 28	Tost Tv	ma: Ve	getative Vigo	r Tier II		Anal	vet·			
Start Date:		20	Protoc		SPP 850.41		netative Viac		-			
inding Dat	-	7.∩4	Specie		ucus carota	JOT IAIR VO	getative vige	Brin				
Duration:	539d 17h	7.04	Source		yer Seed Co	Raltimore	MD	Age:				
						., Buillinore,	, WID					
Sample ID:		64	Code:		718015	0 00 0\		Clier		Smith		
•	te: 10 Aug-11 ate: 30 Jan-13 1	7:04	Materia		amba (#191 SF Corporat	*		Proj	ect:			
Sample Age		7.04	Source Station		or Corporat	ЮП						
			Otation	••								
_	ression Option	S				_					_	
lodel Fund		001			d Option		Optimized		Het Corr	Weighted	1	
og-Normai	[NED=A+B*log	(X)]		ontrol I	hreshold	0.1	Yes	No	No	Yes		
legression	n Summary											
ters LL		BIC	M	1u	Sigma	Adj R2	F Stat	Critical	P-Value	Decision	(α:5%)	
0 -72	2.7 152	157	0.	.844	1.43	0.0216	0.274	2.64	0.8930	Non-Signi	ificant La	ck of Fit
Point Estim	nates											
.evel	95% L	CL 95%	UCL									
C5 0.0	0305 N/A	N/A										
C10 0.1	101 N/A	N/A										
C25 0.7	752 N/A	N/A										
C50 6.9	98 N/A	N/A										
Regression	n Parameters											
arameter	Estima	ate Std	Error 9	5% LCL	95% UCL	t Stat	P-Value	Decision	(α:5%)			
hreshold	0.0751	0.03	63 0.	.00405	0.146	2.07	0.0450	Significan	t Parameter			
Slope	0.697	0.73	8 -0	0.749	2.14	0.945	0.3507	Non-Signi	ficant Param	eter		
							0.5507	_				
	-0.588	0.85	1 -2	2.26	1.08	-0.692	0.4933	Non-Signi	ficant Param	eter		
ntercept		0.85	1 -2	2.26	1.08	-0.692		Non-Signi	ficant Param	eter		
ntercept NOVA Tab	ble	0.85 Squares	1 -2 Mean S		1.08 DF	-0.692 F Stat		Non-Signi		eter		
ntercept ANOVA Tab Source	ble	Squares		Square			0.4933		(α:5%)	eter		
ntercept NOVA Tab Source Model	ble Sum S	Squares 135	Mean S	Square 35	DF	F Stat	0.4933 P-Value	Decision	(α:5%) ficant	eter		
ntercept ANOVA Tab Source Model ack of Fit	Sum \$	Squares 135 87	Mean \$	Square 35 97	DF	F Stat 2.91	0.4933 P-Value 0.0961	Decision Non-Signi	(α:5%) ficant	eter		
ntercept NOVA Tab Ource Model ack of Fit Oure Error	Sum \$ 3.0544 1.2431	Squares 135 187 163	Mean \$ 3.05443 0.31079	Square 35 97 75	DF 1 4	F Stat 2.91	0.4933 P-Value 0.0961	Decision Non-Signi	(α:5%) ficant	eter		
NOVA Tab Source Model ack of Fit Pure Error Residual	Sum S 3.0544 1.2431 39.734 40.977	Squares 135 187 163	Mean \$ 3.05443 0.31079 1.13527	Square 35 97 75	DF 1 4 35	F Stat 2.91	0.4933 P-Value 0.0961	Decision Non-Signi	(α:5%) ficant	eter		
NOVA Tab Source Model ack of Fit Pure Error Residual Al	Sum S 3.0544 1.2431 39.734 40.977	Squares 135 87 163 182	Mean \$ 3.05443 0.31079 1.13527	Square 35 97 75	DF 1 4 35	F Stat 2.91 0.274	0.4933 P-Value 0.0961	Decision Non-Signi	(α:5%) ficant ficant	eter		
ntercept NOVA Tab Source Model ack of Fit Pure Error Residual Attribute	Sum \$ 3.0544 1.2431 39.734 40.977 nalysis	Squares 135 87 163 182	Mean S 3.05443 0.31079 1.13527 1.05077	Square 35 97 75	DF 1 4 35 39	F Stat 2.91 0.274	P-Value 0.0961 0.8929	Decision Non-Signi Non-Signi	(α:5%) ficant ficant			
ntercept NOVA Tab Source Model ack of Fit Pure Error Residual Attribute	Sum S 3.0544 1.2431 39.734 40.977 nalysis Metho	Squares 35 87 63 82 d	Mean \$ 3.05443 0.31079 1.13527 1.05071	Square 35 97 75	DF 1 4 35 39	F Stat 2.91 0.274 Critical	P-Value 0.0961 0.8929	Decision: Non-Signi Non-Signi Decision:	(α:5%) ficant ficant (α:5%)	ogenity		
NOVA Tab Source Model ack of Fit Pure Error Residual Residual Al	Sum S 3.0544 1.2431 39.734 40.977 nalysis Metho of-Fit Pearso Likelih	Squares 135 87 163 182 d	Mean \$ 3.05443 0.31079 1.13527 1.05077	Square 35 97 75 13	DF 1 4 35 39 Test Stat 41 43.4	F Stat 2.91 0.274 Critical 54.6	P-Value 0.0961 0.8929 P-Value 0.3838	Decision: Non-Signi Non-Signi Decision:	(α:5%) ficant ficant (α:5%) ficant Hetero	ogenity		
ANOVA Tab Source Model ack of Fit Pure Error Residual Residual Ai Attribute Goodness-o	Sum S 3.0544 1.2431 39.734 40.977 nalysis Metho Df-Fit Pearso Likelih Mod L	Squares 335 87 63 782 d on Chi-Sq	Mean \$ 3.05443 0.31079 1.13527 1.05077	Square 35 97 75 13	DF 1 4 35 39 Test Stat 41 43.4	F Stat 2.91 0.274 Critical 54.6 54.6	P-Value 0.0961 0.8929 P-Value 0.3838 0.2881	Decision Non-Signi Non-Signi Decision Non-Signi Non-Signi Equal Var	(α:5%) ficant ficant (α:5%) ficant Hetero	ogenity ogenity		
NOVA Tab Source Model ack of Fit Pure Error Residual Residual Ai Attribute Goodness-o	Sum S 3.0544 1.2431 39.734 40.977 nalysis Metho of-Fit Pearso Likelih Mod L Shapir	Squares 135 87 163 182 d on Chi-Sq ood Ratio	Mean \$ 3.05443 0.31079 1.13527 1.05077 GOF GOF uality of \ Normality	Square 35 97 75 13	DF 1 4 35 39 Test Stat 41 43.4 0.62	F Stat 2.91 0.274 Critical 54.6 54.6 2.37	P-Value 0.3838 0.2881 0.7131	Decision Non-Signi Non-Signi Decision Non-Signi Ron-Signi Equal Var	(α:5%) ficant ficant (α:5%) ficant Hetero ficant Hetero ficant Hetero iances	ogenity ogenity n		
NOVA Table Source Model ack of Fit Pure Error Residual Ai attribute Goodness-of Variances Distribution	3.0544 1.2431 39.734 40.977 nalysis Metho of-Fit Pearso Likelih Mod L Shapir Anders	Squares 135 87 163 182 on Chi-Sq ood Ratio evene Eq o-Wilk W	Mean \$ 3.05443 0.31079 1.13527 1.05077 GOF GOF uality of \ Normality	Square 35 97 75 13	DF 1 4 35 39 Test Stat 41 43.4 0.62 0.829	F Stat 2.91 0.274 Critical 54.6 54.6 2.37 0.947 2.49	P-Value 0.3838 0.2881 0.7131 <0.0001	Decision Non-Signi Non-Signi Decision Non-Signi Non-Signi Equal Var Non-norm	(α:5%) ficant ficant (α:5%) ficant Hetero ficant Hetero iances ial Distributio	ogenity ogenity n		
ANOVA Tab Source Model Lack of Fit Pure Error Residual An Attribute Goodness-of Variances Distribution	3.0544 1.2431 39.734 40.977 nalysis Metho of-Fit Pearso Likelih Mod L Shapir Anders	Squares 135 87 163 182 on Chi-Sq ood Ratio evene Eq o-Wilk W	Mean \$ 3.05443 0.31079 1.13527 1.05079 GOF GOF uality of Normality g A2 Nor	Square 35 97 75 13	DF 1 4 35 39 Test Stat 41 43.4 0.62 0.829	F Stat 2.91 0.274 Critical 54.6 54.6 2.37 0.947 2.49	P-Value 0.0961 0.8929 P-Value 0.3838 0.2881 0.7131 <0.0001 <0.0001	Decision Non-Signi Non-Signi Decision Non-Signi Non-Signi Equal Var Non-norm	(α:5%) ficant ficant (α:5%) ficant Hetero ficant Hetero iances ial Distributio	ogenity ogenity n	A	В
ANOVA Tab Source Model Lack of Fit Pure Error Residual Ar Attribute Goodness-of Variances Distribution	Sum S	Squares 135 87 163 182 on Chi-Sq ood Ratio evene Eq o-Wilk W son-Darlin	Mean \$ 3.05443 0.31079 1.13527 1.0507 GOF	Square 35 97 75 13 Variance Y rmality	DF 1 4 35 39 Test Stat 41 43.4 0.62 0.829 3.02	F Stat 2.91 0.274 Critical 54.6 54.6 2.37 0.947 2.49 Calcul	P-Value 0.0961 0.8929 P-Value 0.3838 0.2881 0.7131 <0.0001 <0.0001 ated Variate	Decision Non-Signi Non-Signi Non-Signi Non-Signi Equal Var Non-norm Non-norm	(α:5%) ficant ficant (α:5%) ficant Hetero ficant Hetero iances ial Distributio	ogenity ogenity n n	- A 27	B 30
ANOVA Table Source Model Lack of Fit Pure Error Residual An Attribute Goodness-co /ariances Distribution Survival Survival Survival Survival Group	Sum S 3.0544 1.2431 39.734 40.977 nalysis Metho of-Fit Pearso Likelih Mod L Shapir Anders ummary Control Type	Squares 135 87 163 182 on Chi-Sq ood Ratio evene Eq o-Wilk W son-Darlin	Mean \$ 3.05443 0.31079 1.13527 1.05074 GOF GOF uality of \ Normality g A2 Nor nt M	Square 35 97 75 13 Variance Y rmality	DF 1 4 35 39 Test Stat 41 43.4 0.62 0.829 3.02 Min	F Stat 2.91 0.274 Critical 54.6 54.6 2.37 0.947 2.49 Calcul Max	P-Value 0.0961 0.8929 P-Value 0.3838 0.2881 0.7131 <0.0001 <0.0001 ated Variate Std Err	Decision Non-Signi Non-Signi Non-Signi Non-Signi Non-Signi Non-Signi Equal Var Non-norm Non-norm	(α:5%) ficant ficant (α:5%) ficant Hetero ficant Hetero riances rial Distributio rial Distributio	genity genity n n		
NOVA Table Source Model ack of Fit Pure Error Residual An Attribute Goodness-co Variances Distribution Survival Survival Survival Group	Sum S 3.0544 1.2431 39.734 40.977 nalysis Metho of-Fit Pearso Likelih Mod L Shapir Anders ummary Control Type	Squares 35 87 63 82 d on Chi-Sq ood Ratio evene Eq o-Wilk W son-Darlin Cou	Mean \$ 3.05443 0.31079 1.13523 1.0507 GOF GOF uality of \ Normality g A2 Nor nt M 0 0	Square 35 97 75 13 Variance y rmality 1ean .9	DF 1 4 35 39 Test Stat 41 43.4 0.62 0.829 3.02 Min 0.8	F Stat 2.91 0.274 Critical 54.6 54.6 2.37 0.947 2.49 Calcul	P-Value 0.0961 0.8929 P-Value 0.3838 0.2881 0.7131 <0.0001 <0.0001 ated Variate Std Err 0.0447	Decision Non-Signi Non-Signi Non-Signi Non-Signi Non-Signi Non-Signi Non-norm Non-norm (A/B) Std Dev 0.11	(α:5%) ficant ficant (α:5%) ficant Hetero ficant Hetero ficant Hetero iances hal Distributio hal Distributio CV% 12.2%	ogenity ogenity n n <u>%Effect</u> 0.0%	27	30
NOVA Table Source Model ack of Fit Pure Error Residual Ar Attribute Soodness-co Variances Distribution Survival Survival Survival Group 0009	Sum S 3.0544 1.2431 39.734 40.977 nalysis Metho of-Fit Pearso Likelih Mod L Shapir Anders ummary Control Type	Gquares 35 87 663 782 d on Chi-Sq ood Ratio evene Eq o-Wilk W son-Darlin Cou	Mean \$ 3.05443 0.31079 1.13523 1.05074 GOF GOF uality of \ Normality g A2 Nor nt	Square 35 97 75 13 Variance y rmality 1ean .9	DF 1 4 35 39 Test Stat 41 43.4 0.62 0.829 3.02 Min 0.8 0.8	F Stat 2.91 0.274 Critical 54.6 54.6 2.37 0.947 2.49 Calcul Max 1 1	P-Value 0.0961 0.8929 P-Value 0.3838 0.2881 0.7131 <0.0001 ated Variate Std Err 0.0447 0.0333	Decision Non-Signi Non-Signi Non-Signi Non-Signi Non-Signi Non-Signi Equal Var Non-norm Non-norm 2(A/B) Std Dev 0.11 0.0816	(a:5%) ficant ficant (a:5%) ficant Hetero ficant Hetero iances ial Distributio CV% 12.2% 8.45%	genity genity n n #Effect 0.0% -7.41%	27 29	30 30
ANOVA Table Source Model Lack of Fit Pure Error Residual Al Attribute Soodness-co Variances Distribution Survival Survival Survival L.0009 L.0009 L.0006 L.0076	Sum S 3.0544 1.2431 39.734 40.977 nalysis Metho of-Fit Pearso Likelih Mod L Shapir Anders ummary Control Type	Gquares 35 87 63 82 d on Chi-Sq ood Ratio evene Eq o-Wilk W son-Darlin Cou	Mean \$ 3.05443 0.31079 1.13523 1.05074 GOF GOF uality of \ Normality g A2 Nor nt	Square 35 97 75 13 Variance y rmality Iean .9 .967	DF 1 4 35 39 Test Stat 41 43.4 0.62 0.829 3.02 Min 0.8 0.8 0.6	F Stat 2.91 0.274 Critical 54.6 54.6 2.37 0.947 2.49 Calcul Max 1 1	P-Value 0.0961 0.8929 P-Value 0.3838 0.2881 0.7131 <0.0001 doi.org/10.0001 Std Err 0.0447 0.0333 0.0683	Decision Non-Signi Non-Signi Non-Signi Non-Signi Non-Signi Non-Signi Equal Var Non-norm Non-norm 2(A/B) Std Dev 0.11 0.0816 0.167	(a:5%) ficant ficant (a:5%) ficant Heteroriances final Distribution CV% 12.2% 8.45% 18.6% 12.2%	genity genity n n *Effect 0.0% -7.41% 0.0% 0.0%	27 29 27	30 30 30
ANOVA Table Source Model Lack of Fit Pure Error Residual Ar Attribute Goodness-c Variances Distribution Survival Su Broup 0.0009 0.0006 0.0076 0.0024 0.0661	Sum S 3.0544 1.2431 39.734 40.977 nalysis Metho of-Fit Pearso Likelih Mod L Shapir Anders ummary Control Type	d on Chi-Sq ood Ratio evene Eq o-Wilk W son-Darlin Cours 6 6 6 6 6	Mean \$ 3.05443 0.31079 1.13523 1.0507 GOF GOF uality of \\ Normality g A2 Nor nt	Square 35 97 75 13 Variance y rmality 1ean .9 .967	DF 1 4 35 39 Test Stat 41 43.4 0.62 0.829 3.02 Min 0.8 0.8 0.8 0.6 0.8	F Stat 2.91 0.274 Critical 54.6 54.6 2.37 0.947 2.49 Calcul Max 1 1 1	P-Value 0.0961 0.8929 P-Value 0.3838 0.2881 0.7131 <0.0001 doi.org/10.0001 Std Err 0.0447 0.0333 0.0683 0.0447	Decision Non-Signi Non-Signi Non-Signi Non-Signi Non-Signi Non-Signi Equal Var Non-norm Non-norm 0.04/B) Std Dev 0.11 0.0816 0.167 0.11	(a:5%) ficant ficant (a:5%) ficant Hetero ficant Hetero iances ial Distributio al Distributio CV% 12.2% 8.45% 18.6%	genity genity n n #Effect 0.0% -7.41% 0.0%	27 29 27 27	30 30 30 30

05 Feb-13 16:33 (p 2 of 2) 48718015 Carrot | 01-5851-6282

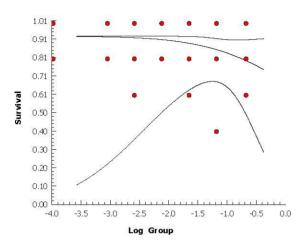
OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

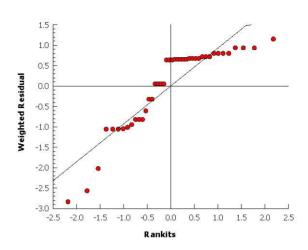
Wildlife International

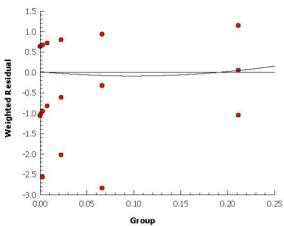
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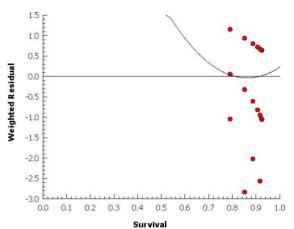
Graphics

Log-Normal [NED=A+B*log(X)]









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	- ,	,						Te	st Code:	48718015 Carr	ot 01-5851-628
OCSPI	P 850.41	50 Terrestrial I	Plant Tier I	(Vegeta	tive Vigor)					Wildli	ife International
Analys Analyz		19-3186-4184 05 Feb-13 16:3		dpoint: alysis:	Height Nonlinear Regr	ession			TIS Version: icial Results:	CETISv1.8.7 Yes	
Batch	ID:	14-8940-0728	Tes	t Type:	Vegetative Vigo	or Tier II		An	alyst:		
Start D		10 Aug-11				SPP 850.4150 Plant Vegetative Vigor			uent:		
		30 Jan-13 17:0			Daucus carota				ne:		
Duratio	•	539d 17h	•		Meyer Seed Co	o., Baltimo	re, MD	Ag			
Sample	o ID:	15-5312-7464	Cod	40.	48718015			Cli	ent: CDM	Smith	
•		10 Aug-11			Dicamba (#191	8 00 0)			oject:	Ommen	
•		30 Jan-13 17:0			BASF Corporat			FIL	ojeci.		
	e Age:			tion:	BAGI COIPOIAI	.1011					
		gression Optic									
	Function					X Tran	sform Y Tra	nsform	Weighting Fu	nction	PTBS Functio
3P Cur	nulative	Log-Normal EV	'[Y=A*(1- ⊄	(log(X/D))/C))]	None	None		Poisson [W=1.		Off [Y*=Y]
Regres	ssion Su	mmary									
Iters	Log L		ВІС	Adj R	2 Optimize	F Stat	Critical	P-Value	Decision(c	::5%)	
46	2560	-5110	-5100	0.1120		0.185	2.64	0.9445	<u>_</u>	cant Lack of Fit	
Point E	Estimate	s									
Level		95% LCL	95% UCL								
IC5	0.0322	2 0.00289	0.127								
IC10	0.238	0.0212	1.09								
IC25	6.76	N/A	809								
IC50	278	N/A	N/A								
Regres	ssion Pa	rameters									
Param	eter	Estimate	Std Erro	r 95% L	CL 95% UCL	t Stat	P-Value	Decisio	n(α:5%)		
Α		27.7	0.792	26.1	29.2	35	<0.0001	Significa	nt Parameter		
С		5.51	4.15	-2.63	13.7	1.33	0.1924	Non-Sig	nificant Param	eter	
D		278	1500	-2660	3220	0.185	0.8538	Non-Sig	nificant Param	eter	
ANOVA	A Table										
Source	e	Sum Squ	ares Me	an Squa	re DF	F Stat	P-Value	Decisio	n(α:5%)		
Model		1.165923		65923	1	7.17	0.0108	Significa			
Lack of		0.131528		32882	4	0.185	0.9445	Non-Sig	nificant		
Pure E		6.208354		77382	35						
Residu	al	6.339882	0.1	62561	39						
Residu	ıal Analy	/sis									
Attribu	ite	Method			Test Stat	Critical	P-Value		n(α:5%)		
Goodne	ess-of-Fi		Chi-Sq GOF		6.34	54.6	1.0000		nificant Hetero		
		Likelihood	d Ratio GOF	•	6.35	54.6	1.0000	Non-Sig	nificant Hetero	genity	
Variand	ces		quality of Va		6.79	12.6	0.3409	Equal V	ariances		
		Mod Leve	ne Equality	of Variar	nce 1.07	2.37	0.3999	Equal V	ariances		
Distribu	ution	Shapiro-V	Vilk W Norn	nality	0.989	0.947	0.9448	Normal	Distribution		
		Δ	D 12 A O	N I 124	. 0.474	0.40	0.0040	N I I	D: () ()		

Anderson-Darling A2 Normality

Count

6

6

6

6

6

6

6

Mean

27.8

26.8

27.5

27.1

26.7

25.5

25.1

Height Summary

Control Type

Negative Control

Group

0.0009

0.0026

0.0076

0.0224

0.0661

0.2113

0

0.171

Min

24

23.2

25.2

26.2

23.8

22.3

23

2.49

Max

30.8

31.3

29.4

28.8

29.7

27

29.3

0.9848

Calculated Variate

Std Err

0.997

1.16

0.596

0.408

0.685

1.07

1

Normal Distribution

CV%

8.77%

10.6%

5.3%

3.69%

9.17%

6.57%

10.5%

% Effect

0.0%

3.65%

1.2%

2.75%

3.95%

8.2%

9.76%

Std Dev

2.44

2.85

1.46

0.999

2.45

1.68

2.63

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Test Code: 48718015 Carrot | 01-5851-6282

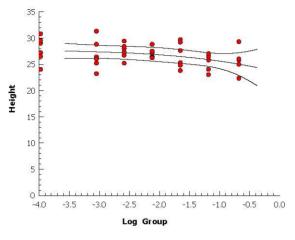
OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

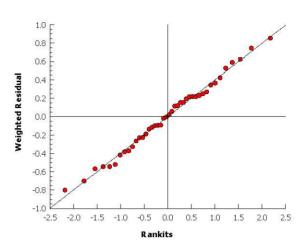
Wildlife International

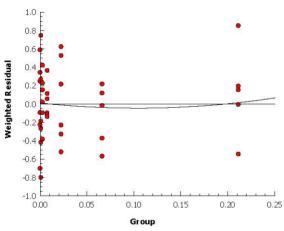
Analysis ID:19-3186-4184Endpoint:HeightCETIS Version:CETIS V1.8.7Analyzed:05 Feb-13 16:31Analysis:Nonlinear RegressionOfficial Results:Yes

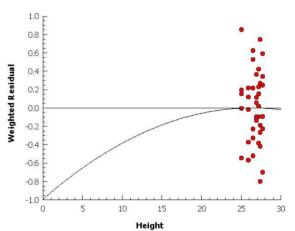
Graphics

3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]









Report Date:

05 Feb-13 16:33 (p 3 of 4) Test Code: 48718015 Carrot | 01-5851-6282

								Test	Code:	48718015 Car	rot 01-5851-6282
OCSPP	850.4150	Terrestrial F	Plant Tier	II (Vegeta	ative Vigor)					Wild	life International
Analysis		1-3353-9560 5 Fob 13 16:3		dpoint:	Weight	rossion			IS Version:		
Analyze		5 Feb-13 16:3		alysis:	Nonlinear Reg	•				: res	
Batch II		1-8940-0728			Vegetative Vig			Anal			
Start Da) Aug-11		otocol:	OCSPP 850.4		'egetative Vi	-			
_) Jan-13 17:0	•	ecies:	Daucus carota			Brin	e:		
Duration	n: 53	39d 17h	So	urce:	Meyer Seed C	o., Baltimor	e, MD	Age	:		
Sample		5-5312-7464	Co	de:	48718015			Clie		MSmith	
	Date: 10	-		aterial:	Dicamba (#19	*		Proj	ect:		
) Jan-13 17:0	4 S o	urce:	BASF Corpora	ation					
Sample	Age: N	Α	Sta	ation:							
Non-Lin	near Regr	ession Optio	ns								
	unction						sform Y Tr				PTBS Function
3P Cum	ulative Lo	g-Normal EV	[Y=A*(1- <	⊅(log(X/D)/C))]	None	None	e F	Poisson [W=	1/Y]	Off [Y*=Y]
Regress	sion Sum	mary									
Iters	Log LL	AICc	BIC	Adj F	2 Optimize	F Stat	Critical	P-Value	Decision	(α:5%)	
6	-40.6	87.9	92.5	0.574	9 Yes	1.05	2.64	0.3960	Non-Sign	ificant Lack of Fit	
Point E	stimates										
Level		95% LCL	95% UC	L							
IC5	0.00388	N/A	0.0108								
IC10	0.00878	0.00177	0.0195								
IC25	0.0343	0.018	0.0589								
IC50	0.156	0.0996	0.245								
Regress	sion Para	meters									
Parame	ter	Estimate	Std Erro	or 95% L	.CL 95% UCL	. t Stat	P-Value	Decision	(α:5%)		
Α		1.09	0.0577	0.979	1.21	18.9	<0.0001	Significan	it Paramete	r	
С		2.25	0.57	1.13	3.36	3.94	0.0003	Significan	it Paramete	r	
D		0.156	0.0416	0.074	7 0.238	3.75	0.0006	Significar	t Paramete	r	
ANOVA	Table										
Source		Sum Squ	ares Me	ean Squa	re DF	F Stat	P-Value	Decision	(α:5%)		
Model		2.088534		88534	1	57.4	<0.0001	Significan	ıt		
Lack of		0.151847		37962	4	1.05	0.3960	Non-Sign	ificant		
Pure Err		1.266133		36175	35						
Residua	ıl	1.41798	0.0	36358	39						
Residua	al Analysi	s									
Attribut		Method		_	Test Stat		P-Value	Decision	<u> </u>		
Goodne	ss-of-Fit	Pearson C			1.42	54.6	1.0000	•	ificant Heter	• •	
		Likelihood			1.41	54.6	1.0000	-	ificant Heter	ogenity	
Variance	es	Bartlett Ed			1.59	12.6	0.9536	Equal Val			
Distribut	tion	Mod Lever Shapiro-W		•	nce 0.249 0.957	2.37 0.947	0.9564 0.1119	Equal Val	riances istribution		
Distribut	lion	Anderson-				2.49	0.1119		nal Distributi	on	
Weight	Summary				., 0.0.0		alculated Va				
_	-		Count	 Mean	Min	Max		Std Dev	C\/0/	% Effect	
Group ∩		trol Type	Count				Std Err		CV%		
0 0000	Nega	ative Control	6	1.12	0.96	1.45	0.0795	0.195	17.4%	0.0%	
0.0009 0.0026			6 6	0.97	0.73 0.76	1.33 1.3	0.0838 0.0774	0.205	21.2%	13.5% 0.0%	
			6	1.12 1.06	0.76	1.3	0.0774	0.19 0.218	16.9% 20.6%		
0.0076 0.0224			6	0.823	0.74	1.32	0.0892	0.218 0.119	20.6% 14.4%	5.35% 26.6%	
0.0224			6	0.623	0.71	1.02	0.0464	0.119	14.4% 25.6%	36.8%	
			6								
0.2113			U	0.495	0.51	0.64	0.0542	0.133	26.8%	55.9%	

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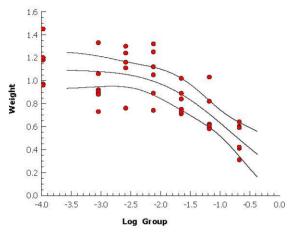
OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

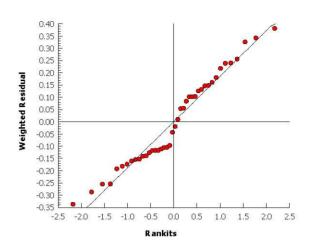
Wildlife International

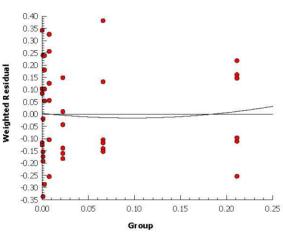
Analysis ID:14-3353-9560Endpoint:WeightCETIS Version:CETISv1.8.7Analyzed:05 Feb-13 16:31Analysis:Nonlinear RegressionOfficial Results:Yes

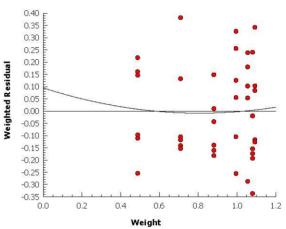
Graphics

3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]









CETIS Summary Report

Report Date: Test Code: 05 Feb-13 16:36 (p 1 of 3) 48718015 Corn | 07-1483-2242

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Wildlife International

E		0!	7	Delegan	
Start Date:	10 Aug-11	Protocol:	OCSPP 850.4150 Plant Vegetative Vigor	Diluent:	
Batch ID:	03-8649-4608	Test Type:	Vegetative Vigor Tier II	Analyst:	L. Eisenhauer

Ending Date:Species:Zea maysBrine:Duration:NASource:New Hope Seed Co.Age:

 Sample ID:
 15-3082-9703
 Code:
 48718015
 Client:
 CDMSmith

Sample Date: 10 Aug-11 Material: Dicamba (#1918-00-9) Project:

Receive Date: Source: BASF Corporation

Sample Age: NA Station:

Batch Note: Dicamba (BAPMA formulation, 47.86%), 100094 **Sample Note:** Dicamba (BAPMA formulation, 47.86%), 100094

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
11-2661-6892	Height	0.0661	0.2113	0.1182	6.29%		Dunnett Multiple Comparison Test
05-0439-6462	Height	0.0661	0.2113	0.1182	4.91%		Williams Multiple Comparison Test
20-0260-6502	Survival	1.9172	>1.9172	NA	NA		Jonckheere-Terpstra Step-Down Test
15-4211-7877	Survival	1.9172	>1.9172	NA	NA		Mann-Whitney U Two-Sample Test
12-9817-5246	Weight	0.0661	0.2113	0.1182	16.4%		Dunnett Multiple Comparison Test
11-6004-8602	Weight	0.0224	0.0661	0.03848	12.8%		Williams Multiple Comparison Test

Point Estimate Summary

Analysis ID	Endpoint	Level		95% LCL	95% UCL	TU	Method
02-9739-2652	Height	IC5	0.0586	0.0183	0.126		Nonlinear Regression
		IC10	0.232	0.127	0.382		
		IC25	2.31	1.38	3.69		
		IC50	29.6	7.43	118		
15-5480-1581	Weight	IC5	0.027	N/A	0.0774		Nonlinear Regression
		IC10	0.0714	0.0218	0.15		
		IC25	0.364	0.221	0.567		
		IC50	2.22	1.33	3.7		

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Wildlife International

Height Sur	Height Summary											
Group	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect	
0	Solvent Blank	6	64.9	62.3	67.6	62.6	69.4	1.04	2.54	3.92%	0.0%	
0	Negative Control	6	68	64.6	71.4	63.2	72.2	1.34	3.27	4.81%	-4.72%	
0.0224		6	71.3	67.8	74.8	65.8	74.2	1.37	3.36	4.72%	-9.8%	
0.0661		6	66.4	64.3	68.6	63.4	69.4	0.835	2.05	3.08%	-2.31%	
0.2113		6	60	57.2	62.8	57.2	64.8	1.1	2.7	4.51%	7.6%	
0.6241		6	59	54.5	63.5	52.4	64.4	1.75	4.28	7.26%	9.19%	
1.9172		6	54	51	57.1	50.2	58.2	1.19	2.92	5.41%	16.8%	

Survival Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Solvent Blank	6	1	1	1	1	1	0	0	0.0%	0.0%
0	Negative Control	6	1	1	1	1	1	0	0	0.0%	0.0%
0.0224		6	1	1	1	1	1	0	0	0.0%	0.0%
0.0661		6	1	1	1	1	1	0	0	0.0%	0.0%
0.2113		6	1	1	1	1	1	0	0	0.0%	0.0%
0.6241		6	1	1	1	1	1	0	0	0.0%	0.0%
1.9172		6	1	1	1	1	1	0	0	0.0%	0.0%

Weight Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Sol∨ent Blank	6	5.94	5.14	6.74	4.73	6.61	0.311	0.761	12.8%	0.0%
0	Negative Control	6	6.86	5.97	7.76	5.75	8.21	0.349	0.854	12.4%	-15.5%
0.0224		6	6.59	5.57	7.61	4.93	7.53	0.396	0.97	14.7%	-10.9%
0.0661		6	5.82	4.84	6.8	4.45	6.96	0.38	0.931	16.0%	2.02%
0.2113		6	5.52	4.5	6.54	4.19	6.84	0.396	0.971	17.6%	7.01%
0.6241		6	4.88	4.18	5.58	3.88	5.62	0.273	0.669	13.7%	17.8%
1.9172		6	3.43	2.89	3.96	2.72	4.05	0.209	0.511	14.9%	42.3%

CETIS Summary Report

Report Date:

05 Feb-13 16:36 (p 3 of 3)

Test Code: 48718015 Corn | 07-1483-2242

OCSPP 850.4150 Terrestrial Plant Tier	r II (Vegetative Vigor)
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Height Det	ail						
Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	62.6	69.4	64.8	63.2	63.4	66.2
0	Negative Control	72.2	71	68.2	67.2	63.2	66.2
0.0224		74.2	71.6	73.8	68.8	65.8	73.6
0.0661		67.2	69.4	65	66.8	66.8	63.4
0.2113		60.8	57.2	59	60.2	58	64.8
0.6241		52.4	60.4	64.4	62.2	57.6	56.8
1.9172		55.8	58.2	50.2	51.4	53.8	54.8

Survival Detail

Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	1	1	1	1	1	1
0	Negative Control	1	1	1	1	1	1
0.0224		1	1	1	1	1	1
0.0661		1	1	1	1	1	1
0.2113		1	1	1	1	1	1
0.6241		1	1	1	1	1	1
1.9172		1	1	1	1	1	1

Weight Detail

Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	5.95	6.57	6.43	6.61	4.73	5.35
0	Negative Control	6.8	6.92	7.28	8.21	5.75	6.22
0.0224		7.53	7.31	6.8	5.99	4.93	6.97
0.0661		5.16	6.6	4.45	6.11	6.96	5.64
0.2113		5.74	4.19	5.46	6.84	4.7	6.21
0.6241		3.88	4.61	4.56	5.62	5.58	5.04
1.9172		4.05	3.36	2.72	2.96	3.75	3.73

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2 The 7 many around response	Test Code:	48718015 Corn 07-1483-2242
OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)		Wildlife International

Analysis ID: Analyzed:	11-2661-6892 05 Feb-13 16	·	indpoint: analysis:	Height Parametric-C	ontrol vs	Treatments			CETIS Version: CETISV Official Results: Yes				
Batch ID:	03-8649-4608	Т	est Type:	Vegetative Vi	gor Tier II		An	alyst: L.	Eisenhauer				
Start Date:	10 Aug-11	P	rotocol:	OCSPP 850.	4150 Plar	it Vegetati∨e V	igor Dil	uent:					
Ending Date:		S	Species:	Zea mays			Bri	ne:					
Duration:	NA	s	Source:	New Hope Se	ed Co.		Ag	e:					
Sample ID:	15-3082-9703	C	ode:	48718015			Cli	ent: CE	DMSmith				
Sample Date:	10 Aug-11	N	Naterial:	Dicamba (#1	918-00-9)		Pro	oject:					
Receive Date:		s	Source:	BASF Corpor	ation								
Sample Age:	NA	S	Station:										
Batch Note:	Dicamba (BA	PMA formu	ulation, 47.	86%), 100094 86%), 100094									
Sample Age: Batch Note: Sample Note: Data Transforr	Dicamba (BA	PMA formu	ulation, 47.	86%), 100094			PMSD	NOEL	LOEL	TOEL	TU		
Batch Note: Sample Note:	Dicamba (BAl Dicamba (BAl m	PMA formu PMA formu	ulation, 47. ulation, 47.	86%), 100094 yp Trials			PMSD 6.29%	NOEL 0.0661	LOEL 0.2113	TOEL 0.1182	TU		
Batch Note: Sample Note: Data Transformed	Dicamba (BA Dicamba (BAI m	PMA formu PMA formu Zeta NA	ulation, 47. ulation, 47. Alt H	86%), 100094 yp Trials	Seed						TU		
Batch Note: Sample Note: Data Transform Untransformed Dunnett Multip	Dicamba (BA Dicamba (BAI m	PMA formu PMA formu Zeta NA	ulation, 47. ulation, 47. Alt H	86%), 100094 yp Trials NA	Seed	DF P-Value			0.2113		TU		
Batch Note: Sample Note: Data Transformed Untransformed Dunnett Multip Control	Dicamba (BAI Dicamba (BAI m ple Compariso vs Group	PMA formu PMA formu Zeta NA	ulation, 47. ulation, 47. Alt H C > T	86%), 100094 yp Trials NA	Seed NA	DF P-Value 10 0.9987	6.29%	0.0661 Decision	0.2113	0.1182	TU		
Batch Note: Sample Note: Data Transformed Untransformed Dunnett Multip	Dicamba (BAI Dicamba (BAI m ple Compariso vs Group	PMA formu PMA formu Zeta NA	ulation, 47. ulation, 47. Alt H C > T	86%), 100094 yp Trials NA Stat Critical 2.34	Seed NA MSD		6.29% P-Type	0.0661 Decision Non-Sign	0.2113 n(α:5%)	0.1182 et	TU		
Batch Note: Sample Note: Data Transformed Untransformed Dunnett Multip Control	Dicamba (BAI Dicamba (BAI m ple Compariso vs Group ol 0.0224	PMA formu PMA formu Zeta NA on Test	ulation, 47. Alt H C > T Test \$ -1.8	86%), 100094 yp Trials NA Stat Critical 2.34	Seed NA MSD 4.28	10 0.9987	6.29% P-Type CDF	0.0661 Decision Non-Sign Non-Sign	0.2113 n(α:5%) nificant Effec	0.1182 et	TU		
Batch Note: Sample Note: Data Transforr	Dicamba (BA) Dicamba (BA) m ple Compariso vs Group rol 0.0224 0.0661	PMA formu PMA formu Zeta NA n Test	ulation, 47. ulation, 47. Alt H C > T Test \$ -1.8 0.855	86%), 100094 yp Trials NA Stat Critical 2.34 2.34	Seed NA MSD 4.28 4.28	10 0.9987 10 0.4847	6.29% P-Type CDF CDF	Decision Non-Sign Non-Sign Significa	0.2113 n(α:5%) nificant Effec	0.1182 et	TU		

Total Distributional Tests

Sum Squares

1267.542

1569.622

302.08

Mean Square

253.5084

10.06933

Source

Between

Error

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	2.71	15.1	0.7450	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.985	0.917	0.8987	Normal Distribution

F Stat

25.2

P-Value

<0.0001

Decision(α:5%)

Significant Effect

DF

5

30

35

Height Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	% Effect
0	Negative Control	6	68	64.6	71.4	67.7	63.2	72.2	1.34	4.81%	0.0%
0.0224		6	71.3	67.8	74.8	72.6	65.8	74.2	1.37	4.72%	-4.85%
0.0661		6	66.4	64.3	68.6	66.8	63.4	69.4	0.835	3.08%	2.3%
0.2113		6	60	57.2	62.8	59.6	57.2	64.8	1.1	4.51%	11.8%
0.6241		6	59	54.5	63.5	59	52.4	64.4	1.75	7.26%	13.3%
1.9172		6	54	51	57.1	54.3	50.2	58.2	1.19	5.41%	20.5%

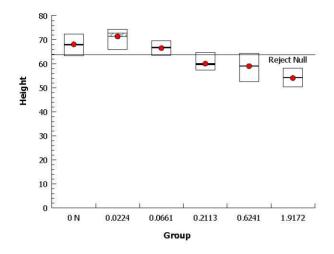
000-503-186-1 CETIS™ v1.8.7.4 Analyst:_____ QA:_____

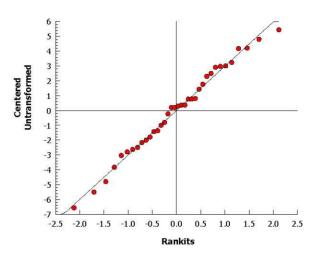
05 Feb-13 16:36 (p 2 of 7) 48718015 Corn | 07-1483-2242

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Wildlife International

Analysis ID:11-2661-6892Endpoint:HeightCETIS Version:CETISv1.8.7Analyzed:05 Feb-13 16:35Analysis:Parametric-Control vs TreatmentsOfficial Results:Yes





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Test Code:	48718015 Corn	107-1483-2242

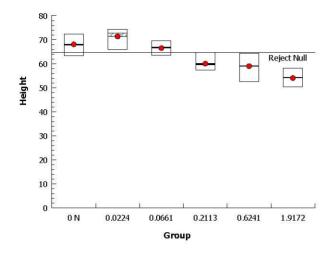
							Test	Code:	407 100	io Coni Jo	7-1483-224
OCSPP 850.4	150 Terrestrial Pla	ant Tier II	(Vegetati	ive Vigor)						Wildlife In	ternational
Analysis ID:	05-0439-6462	End	point: ⊦	Height			CET	IS Version:	: CETISv1	.8.7	
Analyzed:	05 Feb-13 16:35	Ana	lysis: F	Parametric-Cor	itrol vs Orc	.Treatment	s Offic	ial Results	: Yes		
Batch ID:	03-8649-4608	Test	t Type: \	/egetative Vigo	or Tier II		Anal	vst: L.E	Eisenhauer		
Start Date:	10 Aug-11			DCSPP 850.41		egetative Vi		•			
Ending Date:	-	Spe	cies: Z	ea mays		•	Brin	e:			
Duration:	NA	Sou	rce: N	lew Hope See	d Co.		Age	:			
Sample ID:	15-3082-9703	Cod	le: 4	8718015			Clie	nt: CD	MSmith		
Sample Date:	10 Aug-11	Mate	erial: [Dicamba (#191	8-00-9)		Proj	ect:			
Receive Date:	:	Sou	rce: E	BASF Corporat	ion						
Sample Age:	NA	Stat	ion:								
Batch Note:	Dicamba (BAPM	A formulat	ion, 47.86	3%), 100094							
Sample Note:	Dicamba (BAPM	A formulat	ion, 47.86	3%), 100094							
Data Transfor	m	Zeta	Alt Hyp	Trials	Seed		PMSD	NOEL	LOEL	TOEL	TU
Untransformed	t	NA	C > T	NA	NA		4.91%	0.0661	0.2113	0.1182	
Williams Mult	iple Comparison	Test									
Control	vs Group		Test St	at Critical	MSD D	F P-Value	P-Type	Decision	(α:5%)		
Negati∨e Contr	rol 0.0224		-1.8	1.7	3.11 1	0 >0.05	CDF	Non-Sign	ificant Effect	:	
	0.0661		0.855	1.78	3.25 1	0 >0.05	CDF	Non-Sign	ificant Effect		
	0.2113*		4.37	1.8	3.3 1	0 <0.05	CDF	Significar	nt Effect		
	0.6241*		4.93	1.81	3.32 1	0 <0.05	CDF	Significar	nt Effect		
	1.9172*		7.62	1.82	3.34 1	0 <0.05	CDF	Significar	nt Effect		
ANOVA Table											
Source	Sum Squar	es	Mean S	quare	DF	F Stat	P-Value	Decision	(α:5%)		
Between	1267.542		253.508	34	5	25.2	<0.0001	Significar	nt Effect		
Error	302.08		10.0693	33	20						
	002.00		10.0000)J	30						
Total	1569.622		10.0000		35	_					
Total Distributional	1569.622		10.0000								
	1569.622		10.0000	Test Stat		P-Value	Decision	(α:1%)			
Distributional	1569.622 Tests	uality of Va			35	P-Value 0.7450	Decision Equal Var	-			
Distributional Attribute	1569.622 Tests Test	-	ariance	Test Stat	35 Critical		Equal Vai	-			
Distributional Attribute Variances	1569.622 Tests Test Bartlett Equation Shapiro-W	-	ariance	Test Stat 2.71	35 Critical 15.1	0.7450	Equal Vai	riances			
Distributional Attribute Variances Distribution Height Summ	1569.622 Tests Test Bartlett Equal Shapiro-W	-	ariance nality Mean	Test Stat 2.71	35 Critical 15.1 0.917	0.7450	Equal Vai	riances	Std Err	CV%	%Effect
Distributional Attribute Variances Distribution Height Summ Group	1569.622 Tests Test Bartlett Equal Shapiro-W	ilk W Norn	ariance nality Mean 68	Test Stat 2.71 0.985	25 Critical 15.1 0.917 95% UCI 71.4	0.7450 0.8987	Equal Val Normal D Min 63.2	riances istribution	Std Err	CV% 4.81%	% Effect 0.0%
Distributional Attribute Variances Distribution Height Summ Group 0	Tests Test Bartlett Equal Shapiro-Winary Control Type Negative Control	ilk W Norn	ariance nality Mean	Test Stat 2.71 0.985	35 Critical 15.1 0.917	0.7450 0.8987 • Median	Equal Val Normal D Min 63.2 65.8	riances istribution Max			
Distributional Attribute Variances Distribution Height Summ Group 0 0.0224	Tests Test Bartlett Equal Shapiro-William Control Type Negative Control	ilk W Norn Count 6	ariance nality Mean 68	Test Stat 2.71 0.985 95% LCL 64.6	25 Critical 15.1 0.917 95% UCI 71.4	0.7450 0.8987 - Median 67.7	Equal Val Normal D Min 63.2	istribution Max 72.2	1.34	4.81%	0.0%
Distributional Attribute Variances Distribution Height Summ Group 0 0.0224 0.0661	Tests Test Bartlett Equal Shapiro-William Control Type Negative Control	Count 6	ariance nality Mean 68 71.3	Test Stat 2.71 0.985 95% LCL 64.6 67.8	35 Critical 15.1 0.917 95% UCI 71.4 74.8	0.7450 0.8987 • Median 67.7 72.6	Equal Val Normal D Min 63.2 65.8	Max 72.2 74.2	1.34 1.37	4.81% 4.72%	0.0% -4.85%
Distributional Attribute Variances Distribution Height Summ Group	Tests Test Bartlett Equipment Shapiro-W Tary Control Type Negative Control	Count 6 6 6	mariance nality Mean 68 71.3 66.4	Test Stat 2.71 0.985 95% LCL 64.6 67.8 64.3	35 Critical 15.1 0.917 95% UCI 71.4 74.8 68.6	0.7450 0.8987 • Median 67.7 72.6 66.8	Equal Vai Normal D Min 63.2 65.8 63.4	max 72.2 74.2 69.4	1.34 1.37 0.835	4.81% 4.72% 3.08%	0.0% -4.85% 2.3%

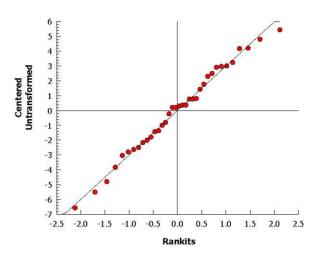
05 Feb-13 16:36 (p 4 of 7) 48718015 Corn | 07-1483-2242

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Wildlife International

Analysis ID:	05-0439-6462	Endpoint:	Height	CETIS Version:	CETISv1.8.7	
Analyzed:	05 Feb-13 16:35	Analysis:	Parametric-Control vs Ord Treatments	Official Results:	Yes	





05 Feb-13 16:36 (p 5 of 7)

Test Code:

48718015 Corn | 07-1483-2242

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative	Vigor)	
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Wildlife International

		53 G-55	recht Punt					
Analysis ID: Analyzed:	15-4211-7877 05 Feb-13 16:35	Endpoint: Analysis:	Survival Nonparametric-Two Sample	CETIS Version: CETISv1.8.7 Official Results: Yes				
Batch ID: Start Date: Ending Date: Duration:	03-8649-4608 10 Aug-11 NA	Test Type: Protocol: Species: Source:	Vegetative Vigor Tier II OCSPP 850.4150 Plant Vegetative Vigor Zea mays New Hope Seed Co.	Analyst: L. Eisenhauer Diluent: Brine: Age:				
Sample ID: Sample Date: Receive Date:	Continue Con	Code: Material: Source:	48718015 Dicamba (#1918-00-9) BASF Corporation	Client: CDMSmith Project:				

Sample Age: NA Station:

Dicamba (BAPMA formulation, 47.86%), 100094 Batch Note: Sample Note: Dicamba (BAPMA formulation, 47.86%), 100094

Data Transform	Zeta	Alt Hyp	Trials	Seed	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	1.9172	>1.9172	NA	

Mann-Whitney U Two-Sample Test

Control vs	Group	Test Stat	Critical	Ties	DF P-Value	P-Type	Decision(α:5%)
Negative Control	0.0224	18	NA	1	10 1.0000	Exact	Non-Significant Effect
	0.0661	18	NA	1	10 1.0000	Exact	Non-Significant Effect
	0.2113	18	NA	1	10 1.0000	Exact	Non-Significant Effect
	0.6241	18	NA	1	10 1.0000	Exact	Non-Significant Effect
	1.9172	18	NA	1	10 1.0000	Exact	Non-Significant Effect

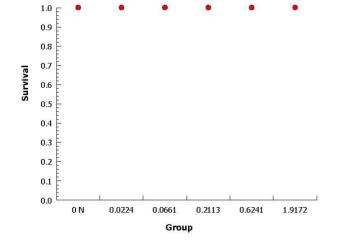
ANOVA Table

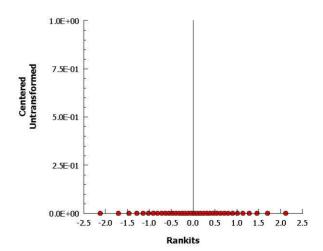
Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0	0	5	65500	<0.0001	Significant Effect
Error	0	0	30			
Total	0		35			

Survival Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	% Effect
0	Negative Control	6	1	1	1	1	1	1	0	0.0%	0.0%
0.0224		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0661		6	1	1	1	1	1	1	0	0.0%	0.0%
0.2113		6	1	1	1	1	1	1	0	0.0%	0.0%
0.6241		6	1	1	1	1	1	1	0	0.0%	0.0%
1.9172		6	1	1	1	1	1	1	0	0.0%	0.0%

Graphics





CETIS™ v1.8.7.4 000-503-186-1 QA: Analyst:___

05 Feb-13 16:36 (p 6 of 7) 48718015 Corn | 07-1483-2242

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Wildlife International

Analysis ID: Analyzed:	20-0260-6502 05 Feb-13 16:35	Endpoint: Analysis:	Survival Nonparametric-Control vs Ord. Treatments	CETIS Version: Official Results	
Batch ID: Start Date: Ending Date: Duration:	03-8649-4608 10 Aug-11 NA	Test Type: Protocol: Species: Source:	Vegetative Vigor Tier II OCSPP 850.4150 Plant Vegetative Vigor Zea mays New Hope Seed Co.	Analyst: L. E Diluent: Brine: Age:	isenhauer
Sample ID: Sample Date: Receive Date:	AND SECON	Code: Material: Source: Station:	48718015 Dicamba (#1918-00-9) BASF Corporation	Client: CDI Project:	MSmith

Dicamba (BAPMA formulation, 47.86%), 100094 Batch Note:

Sample Note: Dicamba (BAPMA formulation, 47.86%), 100094

Data Transform	Zeta	Alt Hyp	Trials	Seed	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	1.9172	>1.9172	NA	

Jonckheere-Terpstra Step-Down Test

Control vs	Group	Test Stat	Critical	Ties	DF	P-Value	P-Type	Decision(α:5%)
Negative Control	0.0224	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect
	0.0661	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect
	0.2113	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect
	0.6241	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect
	1.9172	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect

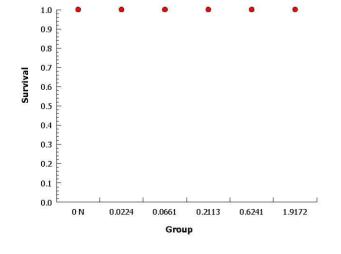
ANOVA Table

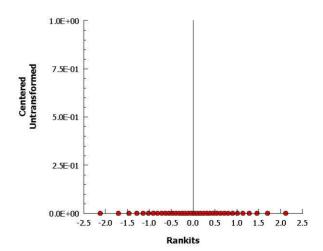
Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0	0	5	65500	<0.0001	Significant Effect
Error	0	0	30			
Total	0		35			

Survival Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	% Effect
0	Negative Control	6	1	1	1	1	1	1	0	0.0%	0.0%
0.0224		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0661		6	1	1	1	1	1	1	0	0.0%	0.0%
0.2113		6	1	1	1	1	1	1	0	0.0%	0.0%
0.6241		6	1	1	1	1	1	1	0	0.0%	0.0%
1.9172		6	1	1	1	1	1	1	0	0.0%	0.0%

Graphics





CETIS™ v1.8.7.4 000-503-186-1 QA: Analyst:___

05 Feb-13 16:36 (p 7 of 7)

,,,,	Test Code:	48718015 Corn 07-1483-2242

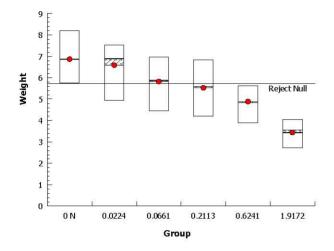
										Te	st Code:	487180	15 Corn 0	7-1483-224
OCSPP 850.4	150 To	errestrial P	lant T	ier II (Veget	ative V	igor)							Wildlife Ir	iternationa
Analysis ID:	12-9	817-5246		Endpoint:	Weigh	nt					TIS Version		1.8.7	
Analyzed:	05 F	eb-13 16:3	5	Analysis:	Param	netric-Cor	trol vs	Treat	tments	Of	ficial Results	s: Yes		
Batch ID:	03-8	649-4608		Test Type:	Veget	ative Vigo	r Tier II			Ar	alyst: L. i	Eisenhauer		
Start Date:	10 A	ug-11		Protocol:	OCSF	P 850.41	50 Plan	t Veg	getative Viç	gor Di	luent:			
Ending Date:				Species:	Zea m	nays				Br	ine:			
Duration:	NA			Source:	New H	lope See	d Co.			Ag	je:			
Sample ID:	15-3	082-9703		Code:	48718	015				CI	ient: CD	MSmith		
Sample Date:	10 A	ug-11		Material:		ba (#191				Pr	oject:			
Receive Date:	:			Source:	BASF	Corporat	ion							
Sample Age:	NA			Station:										
Batch Note:	Dica	mba (BAPN	/IA fori	mulation, 47	.86%),	100094								
Sample Note:	Dica	mba (BAPN	/IA for	mulation, 47	86%),	100094								
Data Transfor	m		Zeta	Alt H	ур 1	rials	Seed			PMSD	NOEL	LOEL	TOEL	TU
Untransformed	t		NA	C > T	, I	1A	NA			16.4%	0.0661	0.2113	0.1182	
Dunnett Multi	ple C	omparison	Test											
Control	vs	Group		Test	Stat C	Critical	MSD	DF	P-Value	P-Type	Decision	ι(α:5%)		
Negative Cont	rol	0.0224		0.57	2	.34	1.13	10	0.6156	CDF	Non-Sign	ificant Effec	t	
		0.0661		2.16	2	2.34	1.13	10	0.0707	CDF	_	ificant Effec	t	
		0.2113*		2.78		2.34	1.13		0.0190	CDF	Significa			
		0.6241*		4.11		2.34	1.13		0.0006	CDF	Significa			
		1.9172*		7.12	2	2.34	1.13	10	<0.0001	CDF	Significa	nt Effect		
ANOVA Table	1													
Source		Sum Squa	res	Mean	Squar	е	DF		F Stat	P-Value	e Decision	ι(α:5%)		
Between		46.91036		9.382			5		13.4	<0.000	l Significar	nt Effect		
Error		20.94772		0.698	2573		30		_					
Total		67.85808					35							
Distributional	Tests	6												
Attribute		Test				est Stat		al	P-Value		on(α:1%)			
Variances				of Variance		2.64	15.1		0.7559		/ariances			
Distribution		Shapiro-W	/ilk W	Normality		.977	0.917		0.6535	Normal	Distribution			
Weight Sumn	-													
Group		rol Type	Cour			5% LCL	95% l	JCL		Min	Max	Std Err	CV%	% Effect
0	Nega	tive Control		6.86		.97	7.76		6.86	5.75	8.21	0.349	12.4%	0.0%
0.0224			6	6.59		5.57	7.61		6.89	4.93	7.53	0.396	14.7%	4.01%
0.0661			6	5.82		.84	6.8		5.88	4.45	6.96	0.38	16.0%	15.2%
0.2113			6	5.52		.5	6.54		5.6	4.19	6.84	0.396	17.6%	19.5%
0.6241			6	4.88		.18	5.58		4.82	3.88	5.62	0.273	13.7%	28.9%
1.9172			6	3.43	2	2.89	3.96		3.55	2.72	4.05	0.209	14.9%	50.0%

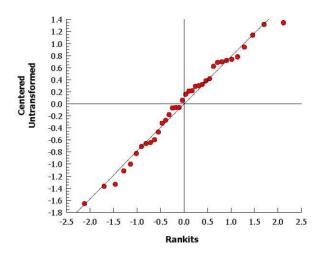
05 Feb-13 16:36 (p 8 of 7) 48718015 Corn | 07-1483-2242

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Wildlife International

Analysis ID:12-9817-5246Endpoint:WeightCETIS Version:CETISv1.8.7Analyzed:05 Feb-13 16:35Analysis:Parametric-Control vs TreatmentsOfficial Results:Yes





05 Feb-13 16:36 (p 9 of 7)

	00 1 00 10 10 10 (p 0 01 1)
Test Code:	48718015 Corn 07-1483-2242

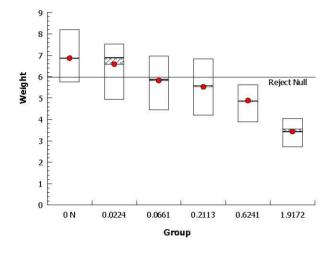
							lest				-1483-224
OCSPP 850.4	150 Terrestrial Pl	ant Tier II	(Vegetati	ve Vigor)						Wildlife Int	ernationa
Analysis ID:	11-6004-8602	Enc	lpoint: V	Veight			CET	IS Version:	CETISv1	.8.7	
Analyzed:	05 Feb-13 16:35		•	Parametric-Con	trol vs Ord.	Treatments	Offic	ial Results	: Yes		
Batch ID:	03-8649-4608	Tes	t Tyne: \	/egetati∨e Vigo	or Tier II		Anal	vst· F	Eisenhauer		
Start Date:	10 Aug-11			CSPP 850.41		aetative Via					
Ending Date:				ea mays		g	Brin				
Duration:	NA	•		lew Hope See	d Co.		Age:				
Sample ID:	15-3082-9703	Cod	le: 4	8718015			Clier	nt: CD	MSmith		
Sample Date:	10 Aug-11	Mat	erial: 🗆	Dicamba (#191	8-00-9)		Proje	ect:			
Receive Date:		Sou	ırce: E	BASF Corporat	ion						
Sample Age:	NA	Stat	tion:								
Batch Note:	Dicamba (BAPM	A formula	tion, 47.86	5%), 100094							
Sample Note:	Dicamba (BAPM	A formula	tion, 47.86	5%), 100094							
Data Transfor	m	Zeta	Alt Hyp	Trials	Seed		PMSD	NOEL	LOEL	TOEL	TU
Untransformed	I	NA	C > T	NA	NA		12.8%	0.0224	0.0661	0.03848	
Williams Mult	iple Comparison	Test									
Control	vs Group		Test St	at Critical	MSD DF	P-Value	P-Type	Decision	(α:5%)		
Negative Contr	rol 0.0224		0.57	1.7	0.819 10	>0.05	CDF	Non-Sign	ificant Effect		
	0.0661*		2.16	1.78	0.857 10	<0.05	CDF	Significar	nt Effect		
	0.2113*		2.78	1.8	0.869 10	<0.05	CDF	Significar	nt Effect		
	0.6241*		4.11	1.81	0.875 10	<0.05	CDF	Significar	nt Effect		
	1.9172*		7.12	1.82	0.879 10	<0.05	CDF	Significar	nt Effect		
ANOVA Table											
Source	Sum Squai	res	Mean S	quare	DF	F Stat	P-Value	Decision	(α:5%)		
Between	46.91036		9.38207	'1	5	13.4	<0.0001	Significar	t Effect		
Error	20.94772		0.00000	-70							
	20.54772		0.69825	0/3	30						
Total	67.85808		0.69825	073	30 35	_					
	67.85808		0.69825	0/3		_					
Distributional	67.85808		0.69825	Test Stat		P-Value	Decision	(α:1%)			
Total Distributional Attribute Variances	67.85808 Tests	uality of V			35	P-Value 0.7559	Decision Equal Var	<u> </u>			
Distributional Attribute Variances	67.85808 Tests Test	_	ariance	Test Stat	35 Critical			iances			
Distributional Attribute Variances Distribution	67.85808 Tests Test Bartlett Eq Shapiro-W	_	ariance	Test Stat 2.64	35 Critical 15.1	0.7559	Equal Var	iances			
Distributional Attribute Variances Distribution Weight Summ	67.85808 Tests Test Bartlett Eq Shapiro-W	_	ariance	Test Stat 2.64	35 Critical 15.1	0.7559 0.6535 Median	Equal Var Normal D	iances	Std Err	CV%	%Effect
Distributional Attribute Variances Distribution Weight Summ	67.85808 Tests Test Bartlett Eq Shapiro-W	ilk W Norr	ariance nality Mean 6.86	Test Stat 2.64 0.977 95% LCL 5.97	75 Critical 15.1 0.917	0.7559 0.6535 Median 6.86	Equal Var Normal D	iances istribution	Std Err 0.349	CV % 12.4%	%Effect 0.0%
Distributional Attribute Variances Distribution Weight Summ Group	67.85808 Tests Test Bartlett Eq Shapiro-W nary Control Type Negative Control	ilk W Norr	ariance nality Mean 6.86 6.59	Test Stat 2.64 0.977 95% LCL	35 Critical 15.1 0.917 95% UCL 7.76 7.61	0.7559 0.6535 Median 6.86 6.89	Equal Var Normal Di Min 5.75 4.93	iances istribution	0.349 0.396		
Distributional Attribute Variances Distribution Weight Summ Group 0 0.0224	67.85808 Tests Test Bartlett Eq Shapiro-W nary Control Type Negative Control	Count	ariance nality Mean 6.86	Test Stat 2.64 0.977 95% LCL 5.97	35 Critical 15.1 0.917 95% UCL 7.76	0.7559 0.6535 Median 6.86	Equal Var Normal Di Min 5.75	iances istribution Max 8.21	0.349	12.4%	0.0%
Distributional Attribute Variances Distribution Weight Summ Group 0 0.0224 0.0661	67.85808 Tests Test Bartlett Eq Shapiro-W nary Control Type Negative Control	Count 6	ariance nality Mean 6.86 6.59	Test Stat 2.64 0.977 95% LCL 5.97 5.57	35 Critical 15.1 0.917 95% UCL 7.76 7.61	0.7559 0.6535 Median 6.86 6.89	Equal Var Normal Di Min 5.75 4.93	Max 8.21 7.53	0.349 0.396	12.4% 14.7%	0.0% 4.01%
Distributional Attribute Variances Distribution Weight Summ	67.85808 Tests Test Bartlett Eq Shapiro-W nary Control Type Negative Control	Count 6 6 6	ariance nality Mean 6.86 6.59 5.82	Test Stat 2.64 0.977 95% LCL 5.97 5.57 4.84	35 Critical 15.1 0.917 95% UCL 7.76 7.61 6.8	0.7559 0.6535 Median 6.86 6.89 5.88	Equal Var Normal D Min 5.75 4.93 4.45	Max 8.21 7.53 6.96	0.349 0.396 0.38	12.4% 14.7% 16.0%	0.0% 4.01% 15.2%

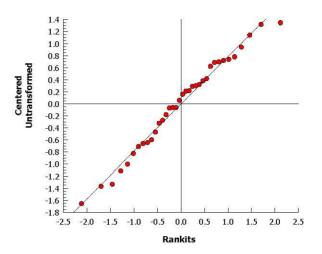
05 Feb-13 16:36 (p 10 of 7) 48718015 Corn | 07-1483-2242

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Wildlife International

Analysis ID:11-6004-8602Endpoint:WeightCETIS Version:CETIS V1.8.7Analyzed:05 Feb-13 16:35Analysis:Parametric-Control vs Ord. TreatmentsOfficial Results:Yes





05 Feb-13 16:36 (p 1 of 4) 48718015 Corn | 07-1483-2242

			V4 T 11 4									
OCSP	P 850.415	50 Terrestrial P	iant Her II (Vegetat	ive Vigor)					1	Wildlif	e International
Analys	sis ID:	02-9739-2652	End	point:	Height			CET	IS Version:	CETISv1.	8.7	
Analyz	ed:	05 Feb-13 16:3	5 Anal	ysis:	Nonlinear Regr	ession		Offic	ial Results:	Yes		
Batch I	ID:	03-8649-4608	Test	Type: \	∕egetative Vigo	or Tier II		Anal	yst: L. Eis	senhauer		
Start D	Date:	10 Aug-11	Prote	ocol: (OCSPP 850.41	50 Plant V	egetative Vig	jor Dilu e	ent:			
Ending	g Date:		Spec	cies: Z	Zea mays			Brin	e:			
Duratio	on:	NA	Sour	rce: I	New Hope See	d Co.		Age:				
Sample	e ID:	15-3082-9703	Code	e: 4	18718015			Clier	nt: CDM	Smith		
Sample	e Date:	10 Aug-11	Mate	erial: I	Dicamba (#191	8-00-9)		Proje	ect:			
Receiv	/e Date:		Sour	rce: I	BASF Corporat	ion						
Sample	e Age:	NA	Stati	on:								
Batch	Note:	Dicamba (BAPI	MA formulati	on, 47.8	6%), 100094							
Sample	e Note:	Dicamba (BAPI	MA formulati	on. 47.8	6%) 100094							
- and												
	insor Bas											
Non-Li	_	gression Optio			270,, 100001							
Non-Li Model	Function	gression Optio	ns				sform Y Tra					PTBS Function
Non-Li Model	Function	gression Optio	ns			X Tran None	sform Y Tra None		Veighting Fu			PTBS Functio
Non-Li Model 3P Cun	Function	gression Option n Log-Normal EV	ns									
Non-Li Model 3P Cun Regres	Function mulative L	gression Option n Log-Normal EV	ns		(C))]	None				(Y)		
Non-Li Model 3P Cun Regres	Function mulative L	gression Option n Log-Normal EV	ns [Y=Α*(1- Φ(l	log(X/D)	(C))]	None	None	; P	oisson [W=1,	/Y] x:5%)		
Non-Li Model 3P Cun Regres Iters	Function mulative L ssion Sui	gression Option Log-Normal EV mmary L AICc -14300	ns [Y=Α*(1- Φ(l	log(X/D)	(C))]	None F Stat	None Critical	P-Value	oisson [W=1,	/Y] x:5%)		
Non-Li Model 3P Cun Regres Iters	Function mulative L ssion Sui Log LL 7160	gression Option Log-Normal EV mmary L AICc -14300	ns [Y=Α*(1- Φ(l	log(X/D)	(C))]	None F Stat	None Critical	P-Value	oisson [W=1,	/Y] x:5%)		
Non-Li Model 3P Cun Regres Iters 23 Point E Level	Function mulative L ssion Sui Log LL 7160	gression Option Log-Normal EV mmary L AICc -14300 s	NS [Y=A*(1- Φ(l BIC -14300	log(X/D)	(C))]	None F Stat	None Critical	P-Value	oisson [W=1,	/Y] x:5%)		
Non-Li Model 3P Cun Regres Iters 23 Point E Level	Function mulative L ssion Sui Log LL 7160 Estimates	gression Option Log-Normal EV mmary L AICc -14300 s	BIC -14300 95% UCL	log(X/D)	(C))]	None F Stat	None Critical	P-Value	oisson [W=1,	/Y] x:5%)		
Non-Li Model 3P Cun Regres Iters 23 Point E Level	Function mulative L ssion Sui Log LL 7160 Estimates	gression Option Log-Normal EV mmary L AICc -14300 s 95% LCL	BIC -14300 95% UCL 0.126	log(X/D)	(C))]	None F Stat	None Critical	P-Value	oisson [W=1,	/Y] x:5%)		
Non-Li Model 3P Cun Regres 1ters 23 Point E Level IC5 IC10 IC25	Function mulative L ssion Sui Log LL 7160 Estimates 0.0586 0.232	gression Option Log-Normal EV mmary L AICc -14300 s 95% LCL 0.0183 0.127	BIC -14300 95% UCL 0.126 0.382	log(X/D)	(C))]	None F Stat	None Critical	P-Value	oisson [W=1,	/Y] x:5%)		
Non-Li Model 3P Cun Regres Iters 23 Point E Level IC5 IC10 IC25 IC50	Function mulative L ssion Sur Log LL 7160 Estimates 0.0586 0.232 2.31	gression Option Log-Normal EV mmary L AICc -14300 s 95% LCL 0.0183 0.127 1.38 7.43	BIC -14300 95% UCL 0.126 0.382 3.69	log(X/D)	(C))]	None F Stat	None Critical	P-Value	oisson [W=1,	/Y] x:5%)		
Non-Li Model 3P Cun Regres Iters 23 Point E Level IC5 IC10 IC25 IC50 Regres	Function mulative L ssion Sur Log LL 7160 Estimates 0.0586 0.232 2.31 29.6 ssion Par	gression Option Log-Normal EV mmary L AICc -14300 s 95% LCL 0.0183 0.127 1.38 7.43	BIC -14300 95% UCL 0.126 0.382 3.69	Adj R2 0.6928	(C))] Proposition of the control of	F Stat 4.85	None Critical	P-Value	Decision(c Significant	/Y] x:5%)		
Non-Li Model 3P Cun Regres lters 23 Point E Level IC5 IC10 IC25 IC50 Regres Parame	Function mulative L ssion Sur Log LL 7160 Estimates 0.0586 0.232 2.31 29.6 ssion Par	gression Option Log-Normal EV mmary L AICc -14300 s 95% LCL 0 0.0183 0.127 1.38 7.43 rameters	BIC -14300 95% UCL 0.126 0.382 3.69 118	Adj R2 0.6928	(C))] Proposition of the control of	F Stat 4.85	Critical 2.92	P-Value 0.0072	Decision(c Significant	/Y] x:5%)		
Non-Li Model 3P Cun Regres Iters 23 Point E Level IC5 IC10 IC25 IC50	Function mulative L ssion Sur Log LL 7160 Estimates 0.0586 0.232 2.31 29.6 ssion Par	gression Option Log-Normal EV mmary L AICc -14300 s 95% LCL 0.0183 0.127 1.38 7.43 rameters Estimate	BIC -14300 95% UCL 0.126 0.382 3.69 118 Std Error	Adj R2 0.6928	PC))] Proposition of the control of	F Stat 4.85	Critical 2.92 P-Value	P-Value 0.0072 Decision: Significan	Decision(c Significant	/Y] x:5%)		

Residual	
Residual	Analysis

ANOVA Table Source

Model

Lack of Fit

Pure Error

Sum Squares

17.66352

2.350939

4.851939

7.202878

Mean Square

17.66352

0.783646

0.161731

0.218269

DF

1

3

30

33

Attribute	Method	Test Stat	Critical	P-Value	Decision(α:5%)
Goodness-of-Fit	Pearson Chi-Sq GOF	7.2	47.4	1.0000	Non-Significant Heterogenity
	Likelihood Ratio GOF	7.21	47.4	1.0000	Non-Significant Heterogenity
Variances	Bartlett Equality of Variance	3.01	11.1	0.6983	Equal Variances
	Mod Levene Equality of Variance	0.838	2.53	0.5331	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.968	0.94	0.3763	Normal Distribution
	Anderson-Darling A2 Normality	0.362	2.49	0.4487	Normal Distribution

F Stat

80.9

4.85

P-Value

<0.0001

0.0072

Decision(a:5%)

Significant

Significant

05 Feb-13 16:36 (p 2 of 4) 48718015 Corn | 07-1483-2242

Test Code:

Wildlife International

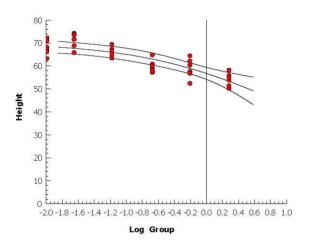
OCSPP 850.4150 Terrestrial Plant Tier II (Vegeta	live Vigor)	į
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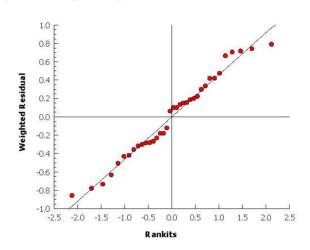
Analysis ID:	02-9739-2652	Endpoint:	Height	CETIS Version:	CETISv1.8.7
Analyzed:	05 Feb-13 16:35	Analysis:	Nonlinear Regression	Official Results:	Yes

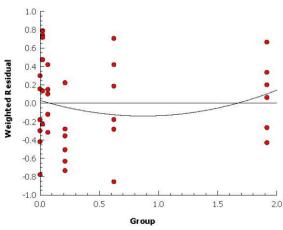
Height Su	ımmary		Calculated Variate						
Group	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	% Effect
0	Negative Control	6	68	63.2	72.2	1.34	3.27	4.81%	0.0%
0.0224		6	71.3	65.8	74.2	1.37	3.36	4.72%	-4.85%
0.0661		6	66.4	63.4	69.4	0.835	2.05	3.08%	2.3%
0.2113		6	60	57.2	64.8	1.1	2.7	4.51%	11.8%
0.6241		6	59	52.4	64.4	1.75	4.28	7.26%	13.3%
1.9172		6	54	50.2	58.2	1.19	2.92	5.41%	20.5%

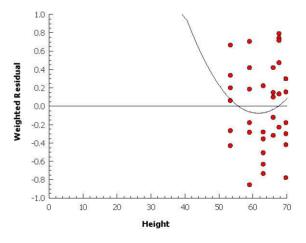
Graphics

3P Cumulative Log-Normal EV [Y=A*(1- $\Phi(\log(X/D)/C)$)]









CETIS Analytical Report

Report Date: 05 Feb-13 16:36 (p 3 of 4) **Test Code:** 48718015 Corn | 07-1483-2242 05 Feb-13 16:36 (p 3 of 4)

								Test	Code:	48718015 Co	rn 07-1483-2242
OCSPP	850.4150) Terrestrial P	Plant Tier II	(Vegetativ	e Vigor)					Wildl	ife International
Analysis	s ID: 1	5-5480-1581	End	point: W	eight			CET	IS Version:	CETISv1.8.7	
Analyze	d: 0	5 Feb-13 16:3	5 Ana	lysis: No	onlinear Regr	ession		Offic	ial Results:	Yes	
Batch IE) : 0	3-8649-4608	Test	t Type: Ve	getative Vigo	or Tier II		Anal	vst: L. Eis	senhauer	
Start Da	ate: 1	0 Aug-11					egetative Vig				
Ending	Date:	-	Spe	cies: Ze	a mays			Brin	e:		
Duration	n: N	IA	Sou	rce: Ne	ew Hope See	d Co.		Age	:		
Sample	ID: 1	5-3082-9703	Cod	e: 48	718015			Clie	nt: CDM	Smith	
Sample	Date: 1	0 Aug-11	Mate	erial: Die	camba (#191	8-00-9)		Proj	ect:		
Receive	Date:		Sou	rce: BA	ASF Corporat	ion					
Sample	Age: N	IA	Stat	ion:							
Batch N	lote: D	icamba (BAPI	MA formulat	ion, 47.869	%), 100094						
Sample	Note: D	icamba (BAPI	MA formulat	ion, 47.86%	%), 100094						
Non-Lin	ear Regi	ession Optio	ns								
Model F	unction					X Trans	sform Y Tra	nsform V	Veighting Fu	nction	PTBS Function
3P Cum	ulative Lo	og-Normal EV	[Y=A*(1- Φ((log(X/D)/C))]	None	None	F	oisson [W=1.	Y]	Off [Y*=Y]
Regress	sion Sum	nmary									
Iters	Log LL	AICc	BIC	Adj R2	Optimize	F Stat	Critical	P-Value	Decision(c	x:5%)	
8	145	-283	-279	0.6640	Yes	0.578	2.92	0.6340	Non-Signifi	cant Lack of Fit	
Point Es	stimates										
Level		95% LCL	95% UCL								
IC5	0.027	N/A	0.0774								
IC10	0.0714	0.0218	0.15								
IC25	0.364	0.221	0.567								
IC50	2.22	1.33	3.7								
Regress	sion Para	ameters									
Paramet	ter	Estimate	Std Error	95% LCL	. 95% UCL	t Stat	P-Value	Decision	(α:5%)		
Α		6.79	0.327	6.15	7.43	20.8	<0.0001	Significan	t Parameter		
С		2.68	0.608	1.49	3.87	4.41	0.0001	-	it Parameter		
D		2.22	0.618	1.01	3.43	3.59	0.0011	Significan	t Parameter		
ANOVA	Table										
Source		Sum Squa	ares Mea	n Square	DF	F Stat	P-Value	Decision	(α:5%)		
Model		8.402064		2064	1	71.2	<0.0001	Significan			
Lack of F		0.212909	0.07		3	0.578	0.6340	Non-Sign	ificant		
Pure Err		3.683728		2791	30						
Residual		3.896636	0.11	808	33						
Residua	al Analys	is									
Attribute		Method	N.O. 555		Test Stat		P-Value	Decision	-	.,	
Goodnes	ss-of-Fit		hi-Sq GOF		3.9	47.4 47.4	1.0000	-	ificant Hetero		
Variance	36		Ratio GOF Juality of Va	riance	3.97 1.08	47.4 11.1	1.0000 0.9561	Non-Sign Equal Vai	ificant Hetero	genity	
variance	. .		ne Equality			2.53	0.9605	Equal Val			
Distributi	ion		ilk W Norm		0.199	0.94	0.4937	•	istribution		
2.031000	2	•	Darling A2 I	-	0.337	2.49	0.5083	Normal D			
			J= .			•					

05 Feb-13 16:36 (p 4 of 4)

Test Code: 48718015 Corn | 07-1483-2242

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

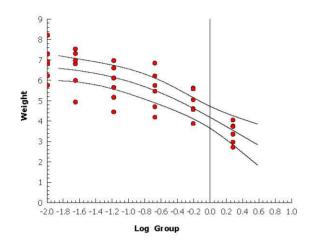
Wildlife International

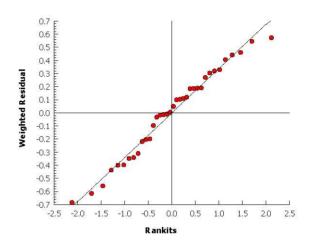
Analysis ID:	15-5480-1581	Endpoint:	Weight	CETIS Version:	CETISv1.8.7
Analyzed:	05 Feb-13 16:35	Analysis:	Nonlinear Regression	Official Regulte:	Yes

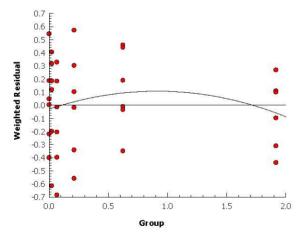
Weight S	ummary				C	Calculated Va	ariate			
Group	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	% Effect	
0	Negative Control	6	6.86	5.75	8.21	0.349	0.854	12.4%	0.0%	
0.0224		6	6.59	4.93	7.53	0.396	0.97	14.7%	4.01%	
0.0661		6	5.82	4.45	6.96	0.38	0.931	16.0%	15.2%	
0.2113		6	5.52	4.19	6.84	0.396	0.971	17.6%	19.5%	
0.6241		6	4.88	3.88	5.62	0.273	0.669	13.7%	28.9%	
1.9172		6	3.43	2.72	4.05	0.209	0.511	14.9%	50.0%	

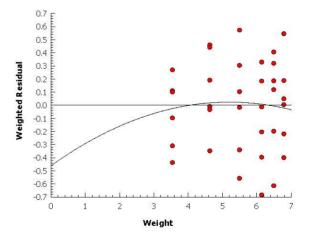
Graphics

3P Cumulative Log-Normal EV [Y=A*(1- $\Phi(\log(X/D)/C)$)]









CETIS Summary Report

0.024

2.48

Report Date:

05 Feb-13 16:39 (p 1 of 2)

CE IIS Suii	птагу керо	11						Test Code:		5 Lettuc 1:	
OCSPP 850.4	150 Terrestrial P	lant Ti	er II (Vegeta	ative Vigor)						Wildlife In	
Batch ID: Start Date: Ending Date: Duration:	03-3476-4657 02 Sep-11 30 Jan-13 17:14 516d 17h	ŀ	Test Type: Protocol: Species: Source:	Vegetative Vigo OCSPP 850.41 Daucus carota Meyer Seed Co	50 Plant Ve		jor	Analyst: Diluent: Brine: Age:			
Sample ID:	18-7382-4495		Code:	48718015				Client: CD	MSmith		
Sample Date:	02 Sep-11		Material:	Dicamba (#191	8-00-9)			Project:			
Receive Date:	: 30 Jan-13 17:14	ļ	Source:	BASF Corporat	ion						
Sample Age:	NA		Station:								
Comparison \$	Summary										
Analysis ID	Endpoint		NOEL		TOEL	PMSD	TU	Method			
04-4797-7677	Height		0.024	>0.024	NA	13.8%			/lultiple Com	-	
16-0439-7637	Height		0.024	>0.024	NA	10.8%			Multiple Con	•	
09-8966-7680			0.024	>0.024	NA	NA			re-Terpstra		
11-0500-6407			0.024	>0.024	NA	NA			re-Terpstra		
18-0702-8469			0.024	>0.024	NA	7.15%			itney U Two		
03-0116-9781	ū		0.008		0.01403	15.9%			/lultiple Com		
02-7016-6216	Weight		0.008	2 0.024	0.01403	12.4%			Multiple Con		
15-3936-5593	Weight		0.008:	2 0.024	0.01403	12.4%		Williams	Multiple Con	nparison Te	est ————
Point Estimat	-										
Analysis ID	Endpoint		Level		95% LCL	95% UCL	TU	Method			
16-7684-1790	Weight		IC5	0.00463	N/A	0.00781		Nonlinear	Regression	J	
			IC10	0.0074	0.00327	0.0114					
			IC25	0.0162	0.0122	0.0207					
			IC50	0.0388	0.0249	0.0606					
Height Summ	-										
Group	Control Type	Coun		95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effec
0	Solvent Blank	6	21.2	18.7	23.7	18	24	0.976	2.39	11.3%	0.0%
0	Negative Control		19	17.5	20.5	17	20.6	0.583	1.43	7.5%	10.2%
0.0003		6	19.8	17.7	21.9	18.4	23.6	0.816	2	10.1%	6.6%
0.0027		6	20.4	17.4	23.4	17.2	25	1.17	2.86	14.0%	3.77%
0.0033		6	21.4	19.3	23.4	19.2	24.8	0.809	1.98	9.27%	-0.79%
0.0082		6	22	20.2	23.9	20.4	25.2	0.718	1.76	7.98%	-3.93%
0.024		6	19.4	18.1	20.8	17.6	21.2	0.525	1.29	6.62%	8.33%
Survival Sum	•										
Group	Control Type	Coun		95% LCL		Min	Max	Std Err	Std Dev	CV%	%Effec
0	Solvent Blank	6	1	1	1	1	1	0	0	0.0%	0.0%
0	Negative Control		1	1	1	1	1	0	0	0.0%	0.0%
0.0003		6	1	1	1	1	1	0	0	0.0%	0.0%
0.0027		6	1	1	1	1	1	0	0	0.0%	0.0%
0.0033		6	1	1	1	1	1	0	0	0.0%	0.0%
0.0082		6	0.9	0.724	1	0.6	1	0.0683	0.167	18.6%	10.0%
0.024		6	1	1	1	1	1	0	0	0.0%	0.0%
Weight Sumn	_										
Group	Control Type	Coun		95% LCL	95% UCL	Min	Мах	Std Err	Std Dev	CV%	%Effec
0	Solvent Blank	6	4.16	3.68	4.65	3.63	4.75	0.188	0.46	11.1%	0.0%
0	Negative Control		3.73	3.4	4.06	3.3	4.15	0.129	0.317	8.5%	10.4%
0.0003		6	4.09	3.61	4.57	3.53	4.69	0.187	0.458	11.2%	1.84%
0.0027		6	3.64	3.07	4.22	3.03	4.4	0.225	0.551	15.1%	12.5%
0.0033		6	3.78	3.22	4.33	2.86	4.32	0.216	0.529	14.0%	9.29%
0.0082		6	3.48	2.97	3.98	2.94	4.2	0.198	0.484	13.9%	16.5%
0.024		6	2 48	2 27	2.69	2 33	2.87	0.0814	0.199	8.03%	40 4%

2.33

2.87

0.0814

0.199

8.03%

40.4%

2.69

2.27

CETIS Summary Report

Report Date:

05 Feb-13 16:39 (p 2 of 2)

Test Code: 48718015 Lettuc | 13-6151-6465

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)	
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Wildlife International

Height Det	Height Detail							
Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	
0	Solvent Blank	18	19.6	19.8	23.2	22.6	24	
0	Negative Control	17	18	20.6	19.2	20.6	18.8	
0.0003		18.4	18.6	18.4	20.2	23.6	19.6	
0.0027		21.2	20	17.6	25	17.2	21.4	
0.0033		19.2	20.2	20.6	21	24.8	22.4	
0.0082		21.8	21	20.4	22.8	21	25.2	
0.024		20.2	19.4	19.8	21.2	17.6	18.4	

Survival Detail

Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	1	1	1	1	1	1
0	Negative Control	1	1	1	1	1	1
0.0003		1	1	1	1	1	1
0.0027		1	1	1	1	1	1
0.0033		1	1	1	1	1	1
0.0082		1	1	1	8.0	0.6	1
0.024		1	1	1	1	1	1

Weight Detail

Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	3.86	4.09	3.63	4.7	4.75	3.95
0	Negative Control	3.74	3.54	4.03	4.15	3.3	3.61
0.0003		3.53	3.88	3.68	4.31	4.43	4.69
0.0027		3.26	3.48	3.45	4.24	3.03	4.4
0.0033		4.24	3.64	3.92	2.86	3.68	4.32
0.0082		3.75	3.67	3.02	2.94	4.2	3.28
0.024		2.33	2.4	2.87	2.52	2.39	2.39

Report Date:

05 Feb-13 16:39 (p 1 of 9)

, _ ,	Test Code:	48718015 Lettuc 13-6151-6465

OCSPP 850.41	150 Terrestrial Plant Ti	ier II (Vegeta	ative Vigor)		Wildlife International
Analysis ID: Analyzed:	04-4797-7677 05 Feb-13 16:37	Endpoint: Analysis:	Height Parametric-Control vs Treatments	CETIS Version: Official Results:	CETISv1.8.7 Yes
Batch ID: Start Date: Ending Date: Duration:	03-3476-4657 02 Sep-11 30 Jan-13 17:14 516d 17h	Test Type: Protocol: Species: Source:	Vegetative Vigor Tier II OCSPP 850.4150 Plant Vegetative Vigor Daucus carota Meyer Seed Co., Baltimore, MD	Analyst: Diluent: Brine: Age:	
Sample ID: Sample Date: Receive Date: Sample Age:	18-7382-4495 02 Sep-11 30 Jan-13 17:14 NA	Code: Material: Source: Station:	48718015 Dicamba (#1918-00-9) BASF Corporation	Client: CDM: Project:	Smith

ample Age:	NA	Station:
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Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	13.8%	0.024	>0.024	NA	

Dunnett Multiple Comparison Test

Control vs	Group	Test Stat	Critical	MSD	DF P-Value	P-Type	Decision(α:5%)
Negative Control	0.0003	-0.679	2.34	2.64	10 0.9614	CDF	Non-Significant Effect
	0.0027	-1.21	2.34	2.64	10 0.9912	CDF	Non-Significant Effect
	0.0033	-2.07	2.34	2.64	10 0.9995	CDF	Non-Significant Effect
	0.0082	-2.66	2.34	2.64	10 0.9999	CDF	Non-Significant Effect
	0.024	-0.354	2.34	2.64	10 0.9172	CDF	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	40.47555	8.09511	5	2.12	0.0905	Non-Significant Effect
Error	114.6133	3.820444	30			
Total	155.0889		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	3.88	15.1	0.5661	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.955	0.917	0.1486	Normal Distribution

Height Summary

_											
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Мах	Std Err	CV%	% Effect
0	Negative Control	6	19	17.5	20.5	19	17	20.6	0.583	7.5%	0.0%
0.0003		6	19.8	17.7	21.9	19.1	18.4	23.6	0.816	10.1%	-4.03%
0.0027		6	20.4	17.4	23.4	20.6	17.2	25	1.17	14.0%	-7.18%
0.0033		6	21.4	19.3	23.4	20.8	19.2	24.8	0.809	9.27%	-12.3%
0.0082		6	22	20.2	23.9	21.4	20.4	25.2	0.718	7.98%	-15.8%
0.024		6	19.4	18.1	20.8	19.6	17.6	21.2	0.525	6.62%	-2.1%

000-503-186-1 CETIS™ v1.8.7.4 Analyst:_____ QA:____

Report Date:

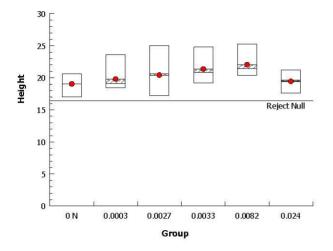
05 Feb-13 16:39 (p 2 of 9)

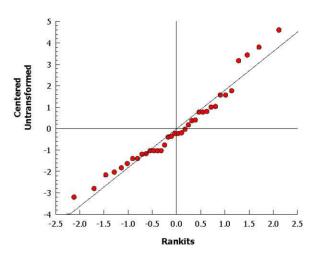
Test Code: 48718015 Lettuc | 13-6151-6465

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vig	or)
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Wildlife International

Analysis ID:	04-4797-7677	Endpoint:	Height	CETIS Version:	CETISv1.8.7
Analyzed:	05 Feb-13 16:37	Analysis:	Parametric-Control vs Treatments	Official Results:	Yes





Report Date:

05 Feb-13 16:39 (p 3 of 9)

	Test Code:	48718015 Lettuc 13-6151-6465
OCODD 050 4450 Temperated Direct Tem II (Memerical Memer))A(! - !!-

OCSPP 850.41	150 Terrestrial Plant	Tier II (Veget	ative Vigor)		Wildlife International
Analysis ID: Analyzed:	16-0439-7637 05 Feb-13 16:38	Endpoint: Analysis:	Height Parametric-Control vs Ord.Treatments	CETIS Version: Official Results:	CETISv1.8.7 Yes
Batch ID: Start Date: Ending Date: Duration:	03-3476-4657 02 Sep-11 30 Jan-13 17:14 516d 17h	Test Type: Protocol: Species: Source:	Vegetative Vigor Tier II OCSPP 850.4150 Plant Vegetative Vigor Daucus carota Meyer Seed Co., Baltimore, MD	Analyst: Diluent: Brine: Age:	
Sample ID: Sample Date: Receive Date:	18-7382-4495 02 Sep-11 30 Jan-13 17:14	Code: Material: Source:	48718015 Dicamba (#1918-00-9) BASF Corporation	Client: CDM Project:	Smith

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	10.8%	0.024	>0.024	NA	•

Williams Multiple Comparison Test

Control vs	Group	Test Stat	Critical	MSD	DF P-Value	P-Type	Decision(α:5%)
Negative Control	0.0003	-0.679	1.7	1.92	10 >0.05	CDF	Non-Significant Effect
	0.0027	-0.945	1.78	2	10 >0.05	CDF	Non-Significant Effect
	0.0033	-1.32	1.8	2.03	10 >0.05	CDF	Non-Significant Effect
	0.0082	-1.65	1.81	2.05	10 >0.05	CDF	Non-Significant Effect
	0.024	-0.354	1.82	2.05	10 >0.05	CDF	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	40.47555	8.09511	5	2.12	0.0905	Non-Significant Effect
Error	114.6133	3.820444	30			
Total	155.0889		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	3.88	15.1	0.5661	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.955	0.917	0.1486	Normal Distribution

Height Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	% Effect
0	Negative Control	6	19	17.5	20.5	19	17	20.6	0.583	7.5%	0.0%
0.0003		6	19.8	17.7	21.9	19.1	18.4	23.6	0.816	10.1%	-4.03%
0.0027		6	20.4	17.4	23.4	20.6	17.2	25	1.17	14.0%	-7.18%
0.0033		6	21.4	19.3	23.4	20.8	19.2	24.8	0.809	9.27%	-12.3%
0.0082		6	22	20.2	23.9	21.4	20.4	25.2	0.718	7.98%	-15.8%
0.024		6	19.4	18.1	20.8	19.6	17.6	21.2	0.525	6.62%	-2.1%

Report Date:

05 Feb-13 16:39 (p 4 of 9)

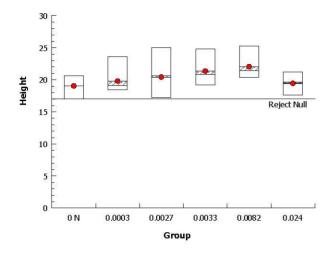
Test Code:

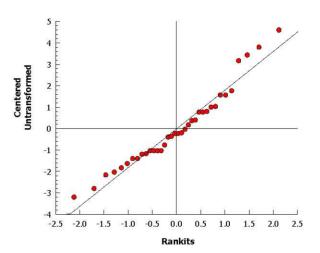
48718015 Lettuc | 13-6151-6465

11					
OCSPP 850.4150	Terrestrial	Plant	Tier II	(Vegetative	Vigor)
					-

Wildlife International

Analysis ID:	16-0439-7637	Endpoint:	Height	CETIS Version:	CETISv1.8.7
Analyzed:	05 Feb-13 16:38	Analysis:	Parametric-Control vs Ord Treatments	Official Resulte:	Vec





05 Feb-13 16:39 (p 5 of 9) 48718015 Lettuc | 13-6151-6465

OCSPP 850 4150 Terrestrial Plant Tier II (Vegetative Vigor)	Wildlife Internationa

OCOFF 030.4	OCOFF 050.4150 Terrestrial Frank fiel if (Vegetative Vigor)						
Analysis ID: Analyzed:	18-0702-8469 Endpoint: Survival CETIS Version: 05 Feb-13 16:37 Analysis: Nonparametric-Two Sample Official Results		CETISv1.8.7 Yes				
Batch ID:	03-3476-4657	Test Type:	Vegetative Vigor Tier II	Analyst:			
Start Date:	02 Sep-11	Protocol:	OCSPP 850.4150 Plant Vegetative Vigor	Diluent:			
Ending Date:	30 Jan-13 17:14	Species:	Daucus carota	Brine:			
Duration:	516d 17h	Source:	Meyer Seed Co., Baltimore, MD	Age:			
Sample ID:	18-7382-4495	Code:	48718015	Client: CDM	ISmith		
Sample Date:	02 Sep-11	Material:	Dicamba (#1918-00-9)	Project:			
Receive Date:	30 Jan-13 17:14	Source:	BASF Corporation				
Sample Age:	NA	Station:					

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU	
Untransformed	NA	C > T	NA	NA	7.15%	0.024	>0.024	NA		

Mann-Whitney U Two-Sample Test

Control vs	Group	Test Stat	Critical	Ties	DF P-Value	P-Type	Decision(α:5%)
Negative Control	0.0003	18	NA	1	10 1.0000	Exact	Non-Significant Effect
	0.0027	18	NA	1	10 1.0000	Exact	Non-Significant Effect
	0.0033	18	NA	1	10 1.0000	Exact	Non-Significant Effect
	0.0082	24	NA	1	10 0.2273	Exact	Non-Significant Effect
	0.024	18	NA	1	10 1.0000	Exact	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.05	0.01	5	2.14	0.0874	Non-Significant Effect
Error	0.14	0.004666667	30			
Total	0.19		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Mod Levene Equality of Variance	2.14	3.7	0.0874	Equal Variances
Variances	Levene Equality of Variance	16	3.7	<0.0001	Unequal Variances
Distribution	Shapiro-Wilk W Normality	0.485	0.917	<0.0001	Non-normal Distribution

Survival Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Мах	Std Err	CV%	% Effect
0	Negative Control	6	1	1	1	1	1	1	0	0.0%	0.0%
0.0003		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0027		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0033		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0082		6	0.9	0.724	1	1	0.6	1	0.0683	18.6%	10.0%
0.024		6	1	1	1	1	1	1	0	0.0%	0.0%

CETIS™ v1.8.7.4 000-503-186-1 Analyst:_____ QA:____

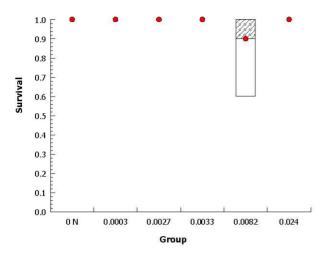
05 Feb-13 16:39 (p 6 of 9)

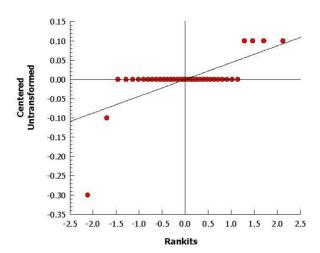
48718015 Lettuc | 13-6151-6465

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Wildlife International

Analysis ID:18-0702-8469Endpoint:SurvivalCETIS Version:CETIS V1.8.7Analyzed:05 Feb-13 16:37Analysis:Nonparametric-Two SampleOfficial Results:Yes





Report Date: 05 Feb-13 16:39 (p 7 of 9)

Test Code:	48718015 Lettuc 13-6151-6465

									Test Cu	ue.	407 100 1	J Lelluc 1	3-0131-0403
OCSPP 850.4	1150 Terrestrial P	lant Tier	II (Vegeta	ative Vigor)							Wildlife Ir	nternational
Analysis ID:	11-0500-6407	Е	ndpoint:	Survival					CETIS \	ersion/	: CETISv1	.8.7	
Analyzed:	05 Feb-13 16:38	в А	nalysis:	Nonparan	netric-Cont	rol vs	Ord. Treati	ments	Official	Result	s: Yes		
Batch ID:	03-3476-4657	Т	est Type:	Vegetativ	e Vigor Tie	r II			Analyst	:			
Start Date:	02 Sep-11		rotocol:	=	50.4150 PI		egetative V	igor	Diluent				
Ending Date:	: 30 Jan-13 17:14	s	pecies:	Daucus c			•	•	Brine:				
Duration:	516d 17h		ource:	Meyer Se	ed Co., Ba	ltimore	e, MD		Age:				
Sample ID:	18-7382-4495		ode:	48718015	ı				Client:	CE	OMSmith		
Sample Date	: 02 Sep-11	M	laterial:	Dicamba	(#1918-00-	9)			Project	:			
Receive Date	: 30 Jan-13 17:14	. s	ource:	BASF Co	•	,			-				
Sample Age:			tation:										
Data Transfo	rm	Zeta	Alt H	yp Trial	s See	d			N	IOEL	LOEL	TOEL	TU
Untransforme	d	NA	C > T	NA	NA				0	.024	>0.024	NA	
Jonckheere-	Terpstra Step-Do	wn Test											
Control	vs Group		Test S	Stat Criti	cal Ties	s Di	F P-Value	P-Ty	/pe D	ecisio	n(α:5%)		
Negative Con	trol 0.0003		0	1.64	1	-2	1.0000	Asyr	mp N	lon-Sigr	nificant Effec	t	
	0.0027		0	1.64	1	-2	1.0000	Asyr	mp N	lon-Sigr	nificant Effec	t	
	0.0033		0	1.64	1	-2	1.0000	Asyr	mp N	lon-Sigr	nificant Effec	t	
	0.0082		2.29	1.64	1	-2		Asyr	mp N	lon-Sigr	nificant Effec	t	
	0.024		1.39	1.64	1	-2	0.0824	Asyr	mp N	lon-Sigr	nificant Effec	t	
ANOVA Table	е												
Source	Sum Squa	res	Mean	Square	DF		F Stat	P-Va	alue D	ecisio	n(α:5%)		
Between	0.05		0.01		5		2.14	0.08	74 N	lon-Sigr	nificant Effect	t	
Error	0.14		0.0046	666667	30								
Total	0.19				35								
Distributiona	ıl Tests												
Attribute	Test			Test	Stat Crit	ical	P-Value	Dec	ision(α:1	l%)			
Variances	Mod Leve	ne Equa	lity of Varia	ance 2.14	3.7		0.0874	Equa	al Varian	ces			
Variances	Levene E	quality of	Variance	16	3.7		<0.0001	Une	qual Vari	ances			
Distribution	Shapiro-V	Vilk W N	ormality	0.48	5 0.9°	17	<0.0001	Non-	-normal [Distribut	tion		
Survival Sum	nmary												
Group	Control Type	Count	Mean			UCL		Min		lax	Std Err	CV%	% Effect
_	Negative Control		1	1	1		1	1	1		0	0.0%	0.0%
0		6	1	1	1		1	1	1		0	0.0%	0.0%
0.0003													
0.0003 0.0027		6	1	1	1		1	1	1		0	0.0%	0.0%
0.0003 0.0027 0.0033		6 6	1 1	1	1		1	1	1		0	0.0%	0.0%
0.0003 0.0027		6	1		1		•						

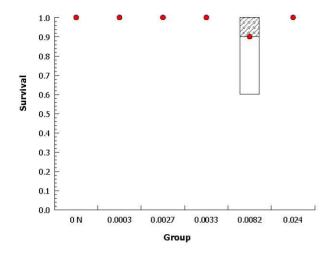
05 Feb-13 16:39 (p 8 of 9)

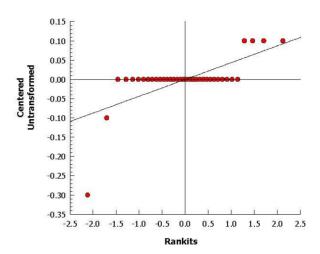
48718015 Lettuc | 13-6151-6465

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Wildlife International

Analysis ID:	11-0500-6407	Endpoint:	Survival	CETIS Version:	CETISv1.8.7	
Analyzed:	05 Feb-13 16:38	Analysis:	Nonparametric-Control vs Ord Treatments	Official Results:	Yes	





Report Date: 05 Feb-13 16:39 (p 9 of 9)

 Test Code:	48718015 Lettuc 13-6151-6465
	Mai me i di di li

OCSPP 850.41	50 Te	rrestrial Pla	ınt Ti	ier II (Veget	ative	Vigor)								Wildlife Ir	nternationa
Analysis ID: Analyzed:		966-7680 eb-13 16:38		Endpoint: Analysis:		vival nparametric	:-Control	vs C	ord. Treatm			S Version al Results		1.8.7	
Batch ID:	03-3	476-4657		Test Type:	Veg	getative Vig	or Tier II				Analy	st:			
Start Date:	02 S	ep-11		Protocol:	ОС	SPP 850.4	150 Plan	it Ve	getative Vig	gor	Dilue	nt:			
Ending Date:	30 Ja	an-13 17:14		Species:	Dau	ucus carota					Brine	:			
Duration:	516d	17h		Source:	Me	yer Seed C	o., Baltir	nore,	, MD		Age:				
Sample ID:	18-7	382-4495		Code:	487	18015				ı	Client	t: CD	MSmith		
Sample Date:	02 S	ep-11		Material:	Dic	amba (#19 ²	18-00-9)				Proje	ct:			
Receive Date:	30 Ja	an-13 17:14		Source:	BA	SF Corpora	tion								
Sample Age:	NA			Station:											
Data Transforn	n	2	Zeta	Alt H	ур	Trials	Seed					NOEL	LOEL	TOEL	TU
Untransformed		ı	NA	C > T		NA	NA					0.024	>0.024	NA	
Jonckheere-Te	erpstr	a Step-Dow	n Te	st											
Control	vs	Group		Test	Stat	Critical	Ties	DF	P-Value	Р-Ту	эе	Decision	ι(α:5%)		
Negative Contro	ol	0.0003		0		1.64	1	-2	1.0000	Asym	ıp	Non-Sign	nificant Effec	:t	
		0.0027		0		1.64	1	-2	1.0000	Asym	ıp	Non-Sign	rificant Effec	:t	
		0.0033		0		1.64	1	-2	1.0000	Asym	ıp	Non-Sign	rificant Effec	:t	
		0.0082		2.29		1.64	1	-2	0.0824	Asym	ıp	Non-Sign	rificant Effec	:t	
		0.024		1.39		1.64	1	-2	0.0824	Asym	ıp	Non-Sign	nificant Effec	:t	
ANOVA Table															
Source		Sum Square	es	Mean	Squ	uare	DF		F Stat	P-Val	lue	Decision	ι(α:5%)		
Between		0.05		0.01			5		2.14	0.087	'4	Non-Sign	nificant Effec	:t	
Error		0.14		0.004	6666	67	30		_						
Total		0.19					35								

Distributional Tests	

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Mod Levene Equality of Variance	2.14	3.7	0.0874	Equal Variances
Variances	Levene Equality of Variance	16	3.7	<0.0001	Unequal Variances
Distribution	Shapiro-Wilk W Normality	0.485	0.917	<0.0001	Non-normal Distribution

Survival Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	% Effect
0	Negative Control	6	1	1	1	1	1	1	0	0.0%	0.0%
0.0003		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0027		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0033		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0082		6	0.9	0.724	1	1	0.6	1	0.0683	18.6%	10.0%
0.024		6	1	1	1	1	1	1	0	0.0%	0.0%

000-503-186-1 CETIS™ v1.8.7.4 Analyst:_____ QA:____

Report Date:

05 Feb-13 16:39 (p 10 of 9)

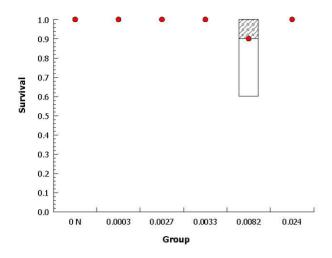
Test Code:

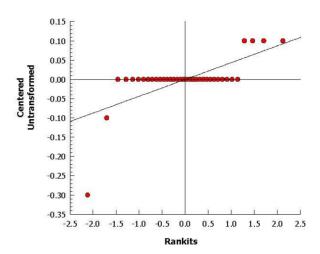
48718015 Lettuc | 13-6151-6465

11					
OCSPP 850.4150	Terrestrial	Plant	Tier II	(Vegetative	Vigor)
					-

Wildlife International

Analysis ID:	09-8966-7680	Endpoint:	Survival	CETIS Version:	CETISv1.8.7
Analyzed:	05 Feb-13 16:38	Analysis:	Nonnarametric-Control vs Ord Treatments	Official Results:	Yes





Report Date:

05 Feb-13 16:39 (p 11 of 9)

	Test Code:	48718015 Lettuc 13-6151-6465
OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)		Wildlife International

Batch ID:	03-3476-4657	Test Type:	Vegetative Vigor Tier II	Analyst:	
Analyzed:	05 Feb-13 16:37	Analysis:	Parametric-Control vs Treatments	Official Results:	Yes
Analysis ID:	03-0116-9781	Endpoint:	Weight	CETIS Version:	CETISv1.8.7

Start Date:02 Sep-11Protocol:OCSPP 850.4150 Plant Vegetative VigorDiluent:Ending Date:30 Jan-13 17:14Species:Daucus carotaBrine:Duration:516d 17hSource:Meyer Seed Co., Baltimore, MDAge:

 Sample ID:
 18-7382-4495
 Code:
 48718015
 Client:
 CDMSmith

 Sample Date:
 02 Sep-11
 Material:
 Dicamba (#1918-00-9)
 Project:

Receive Date: 30 Jan-13 17:14 Source: BASF Corporation

Sample Age: NA Station:

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD NOEL LOEL TOEL TU
Untransformed	NA	C > T	NA	NA	15.9% 0.0082 0.024 0.01403

Dunnett Multiple Comparison Test

Control vs	Group	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control	0.0003	-1.41	2.34	0.595	10	0.9952	CDF	Non-Significant Effect
	0.0027	0.334	2.34	0.595	10	0.7164	CDF	Non-Significant Effect
	0.0033	-0.19	2.34	0.595	10	0.8834	CDF	Non-Significant Effect
	0.0082	0.988	2.34	0.595	10	0.4240	CDF	Non-Significant Effect
	0.024*	4.89	2.34	0.595	10	<0.0001	CDF	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	9.127325	1.825465	5	9.38	<0.0001	Significant Effect
Error	5.83535	0.1945117	30			
Total	14.96268		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	5.48	15.1	0.3604	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.976	0.917	0.5942	Normal Distribution

Weight Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	% Effect
0	Negative Control	6	3.73	3.4	4.06	3.67	3.3	4.15	0.129	8.5%	0.0%
0.0003		6	4.09	3.61	4.57	4.1	3.53	4.69	0.187	11.2%	-9.61%
0.0027		6	3.64	3.07	4.22	3.47	3.03	4.4	0.225	15.1%	2.28%
0.0033		6	3.78	3.22	4.33	3.8	2.86	4.32	0.216	14.0%	-1.3%
0.0082		6	3.48	2.97	3.98	3.47	2.94	4.2	0.198	13.9%	6.75%
0.024		6	2.48	2.27	2.69	2.39	2.33	2.87	0.0814	8.03%	33.4%

000-503-186-1 CETIS™ v1.8.7.4 Analyst:_____ QA:_____

Report Date:

05 Feb-13 16:39 (p 12 of 9)

Test Code:

48718015 Lettuc | 13-6151-6465

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Wildlife International

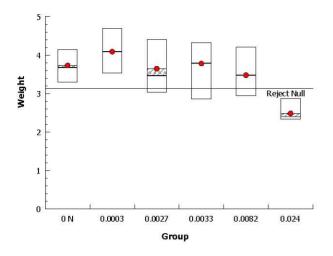
Analysis ID: 03-0116-9781 **Analyzed:** 05 Feb-13 16:37

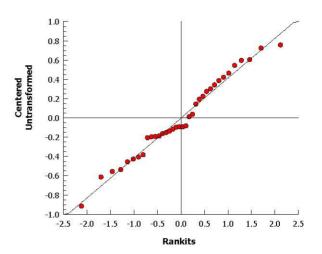
Endpoint: Weight

Analysis: Parametric-Control vs Treatments

CETIS Version: CET Official Results: Yes

: CETISv1.8.7





Report Date:

05 Feb-13 16:39 (p 13 of 9)

	Test Code:	48718015 Lettuc 13-6151-6465
OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)		Wildlife International

Analysis ID: Analyzed:	15-3936-5593 05 Feb-13 16:38	Endpoint: Analysis:	Weight Parametric-Control vs Ord.Treatments	CETIS Version: Official Results:	
Batch ID:	03-3476-4657	Test Type:	Vegetative Vigor Tier II	Analyst:	
Start Date:	02 Sep-11	Protocol:	OCSPP 850.4150 Plant Vegetative Vigor	Diluent:	

Start Date:02 Sep-11Protocol:OCSPP 850.4150 Plant Vegetative VigorDiluent Diluent Diluent Diluent Protocol:Ending Date:30 Jan-13 17:14Species:Daucus carotaBrine:Duration:516d 17hSource:Meyer Seed Co., Baltimore, MDAge:

 Sample ID:
 18-7382-4495
 Code:
 48718015
 Client:
 CDMSmith

 Sample Date:
 02 Sep-11
 Material:
 Dicamba (#1918-00-9)
 Project:

Receive Date: 30 Jan-13 17:14 Source: BASF Corporation

Sample Age: NA Station:

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU	
Untransformed	NA	C > T	NA	NA	12.4%	0.0082	0.024	0.01403		

Williams Multiple Comparison Test

Control vs	Group	Test Stat	Critical	MSD	DF P-V	alue P-Type	Decision(a:5%)
Negative Control	0.0003	-1.41	1.7	0.432	10 >0.0	5 CDF	Non-Significant Effect
	0.0027	0.334	1.78	0.452	10 >0.0	5 CDF	Non-Significant Effect
	0.0033	0.072	1.8	0.459	10 >0.0	5 CDF	Non-Significant Effect
	0.0082	0.988	1.81	0.462	10 >0.0	5 CDF	Non-Significant Effect
	0.024*	4.89	1.82	0.464	10 < 0.0	5 CDF	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	9.127325	1.825465	5	9.38	<0.0001	Significant Effect
Error	5.83535	0.1945117	30			
Total	14.96268		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	5.48	15.1	0.3604	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.976	0.917	0.5942	Normal Distribution

Weight Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	% Effect
0	Negative Control	6	3.73	3.4	4.06	3.67	3.3	4.15	0.129	8.5%	0.0%
0.0003		6	4.09	3.61	4.57	4.1	3.53	4.69	0.187	11.2%	-9.61%
0.0027		6	3.64	3.07	4.22	3.47	3.03	4.4	0.225	15.1%	2.28%
0.0033		6	3.78	3.22	4.33	3.8	2.86	4.32	0.216	14.0%	-1.3%
0.0082		6	3.48	2.97	3.98	3.47	2.94	4.2	0.198	13.9%	6.75%
0.024		6	2.48	2.27	2.69	2.39	2.33	2.87	0.0814	8.03%	33.4%

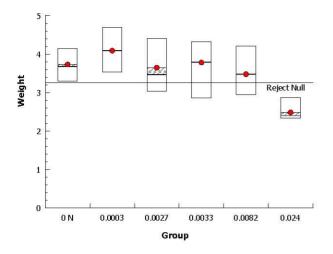
000-503-186-1 CETIS™ v1.8.7.4 Analyst:_____ QA:_____

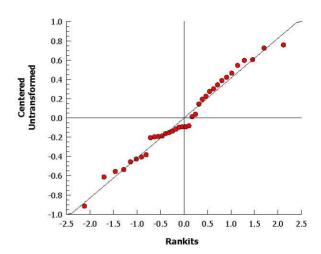
05 Feb-13 16:39 (p 14 of 9) 48718015 Lettuc | 13-6151-6465

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Wildlife International

Analysis ID:15-3936-5593Endpoint:WeightCETIS Version:CETIS V1.8.7Analyzed:05 Feb-13 16:38Analysis:Parametric-Control vs Ord.TreatmentsOfficial Results:Yes





Report Date:

05 Feb-13 16:39 (p 15 of 9)

OCCORD 050 4450 Townsofriel Blo		Milalifa Intonational
	Test Code:	48718015 Lettuc 13-6151-6465

OCSPP 850.4	150 Terrestrial Plant	Tier II (Vegeta	ative Vigor)		Wildlife International		
Analysis ID: Analyzed:	•		CETIS Version: Official Results:	CETISv1.8.7 Yes			
Batch ID:	03-3476-4657	Test Type:	Vegetative Vigor Tier II	Analyst:			
Start Date:	02 Sep-11	Protocol:	OCSPP 850.4150 Plant Vegetative Vigor	Diluent:			
Ending Date:	30 Jan-13 17:14	Species:	Daucus carota	Brine:			
Duration:	516d 17h	Source:	Meyer Seed Co., Baltimore, MD	Age:			
Sample ID:	18-7382-4495	Code:	48718015	Client: CDM	1Smith		
Sample Date:	02 Sep-11	Material:	Dicamba (#1918-00-9)	Project:			
Receive Date:	30 Jan-13 17:14	Source:	BASF Corporation				
Commission Amer	NIA	04-41					

Sample Age: NA Station:

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	12.4%	0.0082	0.024	0.01403	

Williams Multiple Comparison Test

Control vs	Group	Test Stat	Critical	MSD	DF P-Value	P-Type	Decision(α:5%)
Negative Control	0.0003	-1.41	1.7	0.432	10 >0.05	CDF	Non-Significant Effect
	0.0027	0.334	1.78	0.452	10 >0.05	CDF	Non-Significant Effect
	0.0033	0.072	1.8	0.459	10 >0.05	CDF	Non-Significant Effect
	0.0082	0.988	1.81	0.462	10 >0.05	CDF	Non-Significant Effect
	0.024*	4.89	1.82	0.464	10 < 0.05	CDF	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	9.127325	1.825465	5	9.38	<0.0001	Significant Effect
Error	5.83535	0.1945117	30			
Total	14.96268		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	5.48	15.1	0.3604	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.976	0.917	0.5942	Normal Distribution

Weight Summary

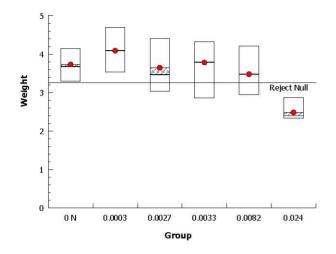
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	% Effect
0	Negative Control	6	3.73	3.4	4.06	3.67	3.3	4.15	0.129	8.5%	0.0%
0.0003		6	4.09	3.61	4.57	4.1	3.53	4.69	0.187	11.2%	-9.61%
0.0027		6	3.64	3.07	4.22	3.47	3.03	4.4	0.225	15.1%	2.28%
0.0033		6	3.78	3.22	4.33	3.8	2.86	4.32	0.216	14.0%	-1.3%
0.0082		6	3.48	2.97	3.98	3.47	2.94	4.2	0.198	13.9%	6.75%
0.024		6	2.48	2.27	2.69	2.39	2.33	2.87	0.0814	8.03%	33.4%

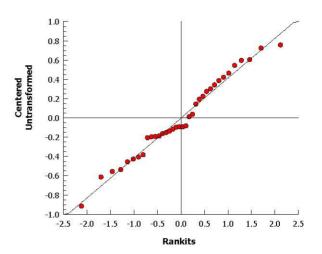
05 Feb-13 16:39 (p 16 of 9) 48718015 Lettuc | 13-6151-6465

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Wildlife International

Analysis ID:02-7016-6216Endpoint:WeightCETIS Version:CETIS V1.8.7Analyzed:05 Feb-13 16:38Analysis:Parametric-Control vs Ord. TreatmentsOfficial Results:Yes





0.024

6

2.48

2.33

Report Date: Test Code: 05 Feb-13 16:39 (p 1 of 2) 48718015 Lettuc | 13-6151-6465

								Test	Code:	48718015 Let	ttuc 13-6151-6465
OCSPP	850.4150	Terrestrial F	Plant Tie	r II (Vegeta	tive Vigor)					Wild	dlife International
Analysis Analyze		i-7684-1790 i Feb-13 16:3		indpoint: analysis:	Weight Nonlinear Reg	ression			IS Version: cial Results	CETISv1.8.7 : Yes	
Batch ID Start Da Ending Duration	ate: 02 Date: 30	-3476-4657 ! Sep-11 ! Jan-13 17:1 6d 17h	4 S	est Type: Protocol: Species: Source:	OCSPP 850.4 Daucus carota	getative Vigor Tier II CSPP 850.4150 Plant Vegetative Vigor ucus carota eyer Seed Co., Baltimore, MD					
Receive	Date: 02	Jan-13 17:1	4 S	Code: flaterial: Source: Station:	48718015 Dicamba (#19 BASF Corpora	,		Clie Proj		//S mith	
Non-Lin	near Regre	ession Optio	ns								
Model F	unction					X Trans	sform Y Tra	ansform V	Veighting F	unction	PTBS Functio
3P Cumi	ulative Log	g-Normal EV	[Y=A*(1-	· Ф(log(X/D)/C))]	None	None	÷ F	oisson [W=	1/Y]	Off [Y*=Y]
Rogross	sion Sumr	mary	<u> </u>							-	
Iters	Log LL	AICc	ВІС	Adj R	2 Optimize	F Stat	Critical	P-Value	Decision(a:5%)	
12	34.6	-62.5	-58.5	0.5642		0.916	2.92	0.4452		ficant Lack of Fi	<u> </u>
	stimates										
	Sumates	050/ 1.01	050/ 11	CI							
Level	0.00400	95% LCL	95% U								
IC5	0.00463	N/A	0.0078								
IC10	0.0074	0.00327	0.0114								
IC25	0.0162	0.0122	0.0207								
IC50	0.0388	0.0249	0.0606								
Regress	sion Parar	neters									
Paramet	ter	Estimate		ror 95% L	.CL 95% UCL	. t Stat	P-Value	Decision	· ,		
Α		3.87	0.119	3.63	4.1	32.6	<0.0001	Significar	it Parameter		
С		1.29	0.393	0.522	2.06	3.29	0.0024	Significar	it Parameter		
D		0.0388	0.0082	1 0.0227	7 0.0549	4.73	<0.0001	Significar	nt Parameter		
ANOVA	Table										
Source		Sum Squ	ares N	lean Squa	re DF	F Stat	P-Value	Decision	(α:5%)		
Model		2.495141	2	.495141	1	47.3	<0.0001	Significar	nt		
Lack of F	Fit	0.145995	0	.048665	3	0.916	0.4452	Non-Sign			
Pure Err	ror	1.594582	0	.053153	30			•			
Residual	ıl	1.740577		.052745	33						
Residua	al Analysis	s									
Attribute	е	Method			Test Stat	Critical	P-Value	Decision	(α:5%)		
Goodnes	ss-of-Fit	Pearson C	hi-Sq G	OF	1.74	47.4	1.0000	Non-Sign	ificant Heter	ogenity	
		Likelihood	Ratio G	OF	1.74	47.4	1.0000	Non-Sign	ificant Heter	ogenity	
Variance	es	Bartlett Ed	uality of	Variance	4.19	11.1	0.5218	Equal Va	riances		
		Mod Leve	ne Equal	ity of Varia		2.53	0.3954	Equal Va	riances		
Distributi	tion	Shapiro-W		-	0.973	0.94	0.5168		istribution		
		Anderson-	Darling A	A2 Normalit	y 0.438	2.49	0.2989	Normal D	istribution		
Weight :	Summary	,				Ca	alculated Va	riate			
Group	-	rol Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	% Effect	
0		ative Control	6	3.73	3.3	4.15	0.129	0.317	8.5%	0.0%	
0.0003	.,,,,		6	4.09	3.53	4.69	0.123	0.458	11.2%	-9.61%	
0.0003			6	3.64	3.03	4.03	0.107	0.450	15.1%	2.28%	
0.0027				3.78		4.4	0.225	0.529			
			6		2.86				14.0%	-1.3%	
0.0082			6	3.48	2.94	4.2	0.198	0.484	13.9%	6.75%	

0.0814

0.199

8.03%

33.4%

2.87

05 Feb-13 16:39 (p 2 of 2) 48718015 Lettuc | 13-6151-6465

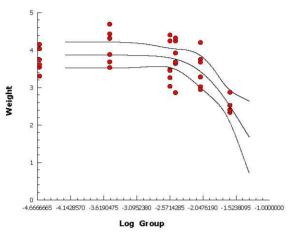
OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

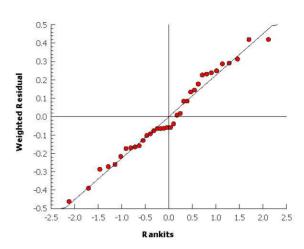
Wildlife International

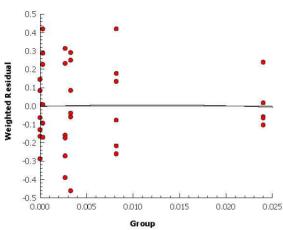
Analysis ID:16-7684-1790Endpoint:WeightCETIS Version:CETIS V1.8.7Analyzed:05 Feb-13 16:37Analysis:Nonlinear RegressionOfficial Results:Yes

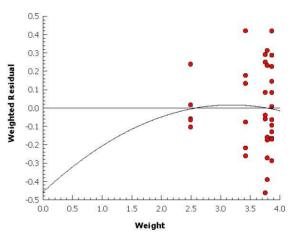
Graphics

3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]









CETIS Summary Report

Report Date:

05 Feb-13 16:43 (p 1 of 3) **Test Code:** 48718015 Onion | 12-1866-7089

OCSPP 850.41	150 Terrestrial Plant	Tier II (Vegeta	ative Vigor)				Wildlife International
Batch ID: Start Date: Ending Date: Duration:	10-8476-1536 02 Sep-11 30 Jan-13 16:17 516d 16h	Test Type: Protocol: Species: Source:	Vegetative Vig OCSPP 850.4 Allium cepa Park Seed Co	150 Plant Ve	getative Vig	or	Analyst: Diluent: Brine: Age:
Sample ID: Sample Date: Receive Date: Sample Age:	30 Jan-13 16:17	Code: Material: Source: Station:	48718015 Dicamba (#19 BASF Corpora	,			Client: CDMSmith Project:
Comparison S	Summary						
Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
16-9978-1826	Height	0.211	1 0.6474	0.3697	19.8%		Dunnett Multiple Comparison Test
18-1063-8773	Height	0.072	1 0.2111	0.1234	15.0%		Williams Multiple Comparison Test
18-8371-4823	Survival	0.072	1 0.2111	0.1234	NA		Jonckheere-Terpstra Step-Down Test
02-0247-4792	Survival	0.211	1 0.6474	0.3697	14.0%		Mann-Whitney U Two-Sample Test
07-0980-6612	Weight	0.072	1 0.2111	0.1234	NA		Jonckheere-Terpstra Step-Down Test
00-6805-0864	Weight	0.072	1 0.2111	0.1234	44.1%		Mann-Whitney U Two-Sample Test
Point Estimate	e Summary						
Analysis ID	Endpoint	Level		95% LCL	95% UCL	TU	Method
06-0139-0694	Height	IC5	0.051	N/A	0.101		Nonlinear Regression
		IC10	0.0981	0.0434	0.163		
		IC25	0.293	0.199	0.41		
		IC50	0.987	0.737	1.32		
01-7998-1010	Survival	EC5	0.285	0.15	0.405		Linear Regression (MLE)
		EC10		0.219	0.502		
		EC25	0.574	0.402	0.737		
		EC50		0.727	1.22		
17-1391-2216	Survival	EC50	0.963	0.724	1.28		Trimmed Spearman-Kärber
	10 (aimht	105	0.028	N/A	0.0742		Nonlinear Regression
19-1063-3159	Weight	IC5	0.020	14773	0.0772		Nonlinear Regression
19-1063-3159	vveigni	IC10 IC25	0.0438 0.0924	N/A 0.0402	0.0898 0.161		Nonlinear Regression

IC50

0.212 0.139

0.323

05 Feb-13 16:43 (p 2 of 3)

48718015 Onion | 12-1866-7089

Wildlife International

Height Sui	Height Summary												
Group	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect		
0	Solvent Blank	6	30.7	27.4	34	25.8	35.6	1.29	3.16	10.3%	0.0%		
0	Negative Control	6	29	26	32	25.4	33.4	1.15	2.82	9.72%	5.54%		
0.024		6	29.2	26.7	31.7	26	32.4	0.967	2.37	8.1%	4.78%		
0.0721		6	29.8	26.5	33.1	27	34.6	1.29	3.17	10.6%	2.93%		
0.2111		6	25.4	21.9	29	19.6	29.6	1.38	3.39	13.3%	17.2%		
0.6474		6	15.5	12.4	18.6	11.7	19.7	1.21	2.96	19.2%	49.6%		
1.9699		2	13.2	-14.2	40.5	11	15.3	2.15	3.04	23.1%	57.2%		

Survival Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Solvent Blank	6	1	1	1	1	1	0	0	0.0%	0.0%
0	Negative Control	6	1	1	1	1	1	0	0	0.0%	0.0%
0.024		6	1	1	1	1	1	0	0	0.0%	0.0%
0.0721		6	1	1	1	1	1	0	0	0.0%	0.0%
0.2111		6	0.967	0.881	1	0.8	1	0.0333	0.0816	8.45%	3.33%
0.6474		6	0.733	0.517	0.95	0.6	1	0.0843	0.207	28.2%	26.7%
1.9699		6	0.133	0	0.388	0	0.6	0.0989	0.242	182.0%	86.7%

Weight Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Solvent Blank	6	0.243	0.197	0.289	0.202	0.304	0.0179	0.0439	18.1%	0.0%
0	Negative Control	6	0.223	0.137	0.309	0.11	0.316	0.0336	0.0822	36.9%	8.1%
0.024		6	0.204	0.146	0.261	0.122	0.282	0.0225	0.055	27.0%	16.1%
0.0721		6	0.205	0.107	0.303	0.11	0.352	0.0383	0.0937	45.7%	15.5%
0.2111		6	0.116	0.0793	0.153	0.07	0.17	0.0143	0.035	30.1%	52.2%
0.6474		6	0.0257	0.0137	0.0377	0.008	0.04	0.00467	0.0114	44.5%	89.4%
1.9699		2	0.0265	-0.0561	0.109	0.02	0.033	0.0065	0.00919	34.7%	89.1%

CETIS Summary Report

Report Date: Test Code: 05 Feb-13 16:43 (p 3 of 3)

48718015 Onion | 12-1866-7089

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) Wildlife Intern	getative Vigor) Wildlife International
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Height Det	ail						
Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	31.6	30.8	29.6	25.8	30.8	35.6
0	Negative Control	33.4	25.4	29.6	30.6	27.6	27.4
0.024		27.2	32.4	30.6	30.4	26	28.8
0.0721		32.8	27	29.2	27.2	28	34.6
0.2111		27.4	24.6	19.6	26.5	29.6	24.8
0.6474		17.8	13	11.7	15	15.6	19.7
1.9699			11			15.3	

Survival Detail

Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	1	1	1	1	1	1
0	Negative Control	1	1	1	1	1	1
0.024		1	1	1	1	1	1
0.0721		1	1	1	1	1	1
0.2111		1	1	1	0.8	1	1
0.6474		1	0.6	0.6	0.6	1	0.6
1.9699		0	0.2	0	0	0.6	0

Weight Detail

Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	0.254	0.206	0.282	0.202	0.208	0.304
0	Negative Control	0.316	0.11	0.23	0.31	0.154	0.218
0.024		0.164	0.282	0.226	0.21	0.122	0.218
0.0721		0.28	0.11	0.186	0.178	0.124	0.352
0.2111		0.142	0.104	0.07	0.108	0.17	0.102
0.6474		0.03	0.027	0.017	0.04	0.032	0.008
1.9699			0.02			0.033	

Report Date:

05 Feb-13 16:41 (p 1 of 7)

Test Code: 48718015 Onion | 12-1866-7089

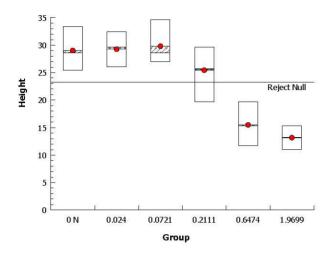
								163	t Coue.	401 1001	3 Onion 1	2-1000-700
OCSPP 850.	4150 Terrestrial P	Plant Ti	er II (Vegeta	ative Vigor)							Wildlife In	ternational
Analysis ID:			Endpoint:	•					TIS Version		1.8.7	
Analyzed:	05 Feb-13 16:4	0	Analysis:	Parametric-C	Control vs	Treat	tments	Offi	cial Results	s: Yes		
Batch ID:	10-8476-1536		Test Type:	Vegetative V	igor Tier I			Ana	alyst:			
Start Date:	02 Sep-11		Protocol:	OCSPP 850	4150 Plar	it Ve	getative Vigo	r Dil u	ient:			
Ending Date	: 30 Jan-13 16:1	7	Species:	Allium cepa				Brii	ne:			
Duration:	516d 16h		Source:	Park Seed C	0.			Age	:			
Sample ID:	16-3286-2333		Code:	48718015				Clie	ent: CD	MSmith		
Sample Date	e: 02 Sep-11		Material:	Dicamba (#1	918-00-9)			Pro	ject:			
Receive Date	e: 30 Jan-13 16:13	7	Source:	BASF Corpo	ration							
Sample Age	: NA		Station:									
Data Transfo	orm	Zeta	Alt H	yp Trials	Seed			PMSD	NOEL	LOEL	TOEL	TU
Untransforme	ed	NA	C > T	NA	NA			19.8%	0.2111	0.6474	0.3697	
Dunnett Mul	tiple Comparison	Test										
Control	vs Group		Test \$	Stat Critical	MSD	DF	P-Value	P-Type	Decision	ι(α:5%)		
Negative Cor	legative Control 0.024		-0.136	3 2.37	4.06	10	0.8882	CDF	Non-Sign	ificant Effec	t	
	0.0721		-0.467	2.37	4.06	10	0.9473	CDF	Non-Sign	ificant Effec	t	
	0.2111		2.09	2.37	4.06	10	0.0863	CDF	Non-Sign	ificant Effec	t	
	0.6474*		7.9	2.37	4.06	10	<0.0001	CDF	Significar	nt Effect		
	1.9699*		6.55	2.37	5.74	6	<0.0001	CDF	Significar	nt Effect		
ANOVA Tabl	е											
Source	Sum Squa	ares	Mean	Square	DF		F Stat	P-Value	Decision	ι(α:5%)		
Between	1168.959		233.7	917	5		26.6	<0.0001	Significar	nt Effect		
Error	228.64		8.793	846	26		_					
Total	1397.599				31							
Distribution	al Tests											
Attribute	Test			Test St	at Critic	al	P-Value	Decision	η(α:1%)			
Variances	Bartlett E	quality	of Variance	0.626	15.1		0.9868	Equal Va	riances			
Distribution	Shapiro-V	Vilk W I	Normality	0.976	0.908		0.6679	Normal [Distribution			
Height Sumi	mary											
Group	Control Type	Coun				JCL	Median	Min	Max	Std Err	CV%	% Effect
0	Negative Contro		29	26	32		28.6	25.4	33.4	1.15	9.72%	0.0%
0.024		6	29.2	26.7	31.7		29.6	26	32.4	0.967	8.1%	-0.81%
0.0721		6	29.8	26.5	33.1		28.6	27	34.6	1.29	10.6%	-2.76%
0.2111		6	25.4	21.9	29		25.6	19.6	29.6	1.38	13.3%	12.4%
0.6474 1.9699		6 2	15.5 13.2	12.4 -14.2	18.6 40.5		15.3 13.1	11.7 11	19.7 15.3	1.21 2.15	19.2% 23.1%	46.7% 54.7%

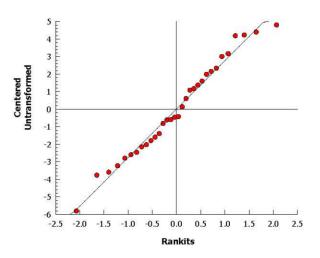
05 Feb-13 16:41 (p 2 of 7) 48718015 Onion | 12-1866-7089

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Wildlife International

Analysis ID:16-9978-1826Endpoint:HeightCETIS Version:CETIS V1.8.7Analyzed:05 Feb-13 16:40Analysis:Parametric-Control vs TreatmentsOfficial Results:Yes





Report Date:

05 Feb-13 16:41 (p 3 of 7)

	Test Code:	48718015 Onion 12-1866-7089
OCSPP 850 4150 Terrestrial Plant Tier II (Vegetative Vigor)		Wildlife International

OCSPP 850.41	150 Terrestrial Plant	Tier II (Veget	ative Vigor)		Wildlife International
Analysis ID:	18-1063-8773	Endpoint:	Height Parametric-Control vs Ord.Treatments	CETIS Version: C	CETISv1.8.7
Analyzed:	05 Feb-13 16:41	Analysis:		Official Results: Y	′es
Batch ID:	10-8476-1536	Test Type:	Vegetative Vigor Tier II	Analyst:	
Start Date:	02 Sep-11	Protocol:	OCSPP 850.4150 Plant Vegetative Vigor	Diluent:	
Ending Date:	30 Jan-13 16:17	Species:	Allium cepa	Brine:	
Duration:	516d 16h	Source:	Park Seed Co.	Age:	
Sample ID: Sample Date: Receive Date: Sample Age:	16-3286-2333 02 Sep-11 30 Jan-13 16:17 NA	Code: Material: Source: Station:	48718015 Dicamba (#1918-00-9) BASF Corporation	Client: CDMSm Project:	nith

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU	
Untransformed	NA	C > T	NA	NA	15.0%	0.0721	0.2111	0.1234		

Untransformed	NA	C > T	NA	NA		15.0%	0.0721	0.2111	0.1234	
Williams Multiple C	omparison Test									
Control vs	Group	Test Stat	Critical	MSD	DF P-Value	P-Type	Decision	(a:5%)		

Control vs	Group	lest Stat	Critical	WSD	DF	P-Value	P-Type	Decision(a:5%)
Negative Control	0.024	-0.136	1.71	2.92	10	>0.05	CDF	Non-Significant Effect
	0.0721	-0.302	1.78	3.06	10	>0.05	CDF	Non-Significant Effect
	0.2111*	2.09	1.81	3.1	10	<0.05	CDF	Significant Effect
	0.6474*	7.9	1.82	3.12	10	<0.05	CDF	Significant Effect
	1.9699*	6.55	1.8	4.35	6	<0.05	CDF	Significant Effect

ANOVA Table						
Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	1168.959	233.7917	5	26.6	<0.0001	Significant Effect
Error	228.64	8.793846	26			
Total	1397.599		31			

Distributional Test	Distributional Tests									
Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)					
Variances	Bartlett Equality of Variance	0.626	15.1	0.9868	Equal Variances					
Distribution	Shapiro-Wilk W Normality	0.976	0.908	0.6679	Normal Distribution					

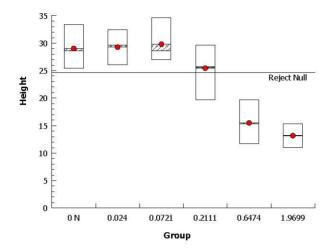
Height Summary											
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	% Effect
0	Negative Control	6	29	26	32	28.6	25.4	33.4	1.15	9.72%	0.0%
0.024		6	29.2	26.7	31.7	29.6	26	32.4	0.967	8.1%	-0.81%
0.0721		6	29.8	26.5	33.1	28.6	27	34.6	1.29	10.6%	-2.76%
0.2111		6	25.4	21.9	29	25.6	19.6	29.6	1.38	13.3%	12.4%
0.6474		6	15.5	12.4	18.6	15.3	11.7	19.7	1.21	19.2%	46.7%
1.9699		2	13.2	-14.2	40.5	13.1	11	15.3	2.15	23.1%	54.7%

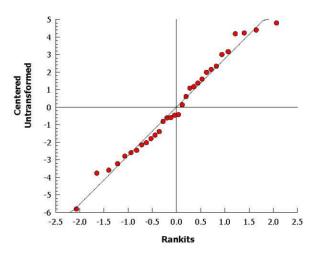
05 Feb-13 16:41 (p 4 of 7) 48718015 Onion | 12-1866-7089

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Wildlife International

Analysis ID:18-1063-8773Endpoint:HeightCETIS Version:CETIS V1.8.7Analyzed:05 Feb-13 16:41Analysis:Parametric-Control vs Ord.TreatmentsOfficial Results:Yes





Report Date: 05 Feb-13 16:41 (p 5 of 7)

 •	Test Code:	48718015 Onion 12-1866-7089

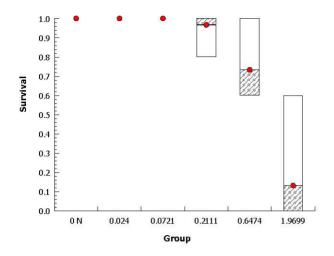
OCSPP 850.4	150 Terrestrial Plant	Tier II (Vegeta	ative Vigor)						Wildlife In	ternationa	
Analysis ID:	02-0247-4792	Endpoint:	Survival			CE.	TIS Version	: CETISv1	.8.7		
Analyzed:	05 Feb-13 16:40	Analysis:	Nonparametric	-Two Sampl	е	Offi	cial Results	s: Yes			
Batch ID:	10-8476-1536	Test Type:	Vegetative Vige	or Tier II		Ana	alyst:				
Start Date:	02 Sep-11	Protocol:	OCSPP 850.41		getative Vic		ient:				
	•	Species:	Allium cepa			Brin					
Duration:	516d 16h	Source:	Park Seed Co.			Age					
Sample ID:	16-3286-2333	Code:	48718015			Clie	nt: CD	MSmith			
Sample Date:		Material:	Dicamba (#191	8-00-9)			ject:	AMOITHET			
•	: 30 Jan-13 16:17	Source:	BASF Corporat	,		110	joot.				
Sample Age:		Station:	B/(C) COIPOIG								
Data Transfor		a Alt H		Seed		PMSD	NOEL	LOEL	TOEL	TU	
Untransformed	AN b	U > 1	NA	NA		14.0%	0.2111	0.6474	0.3697		
Mann-Whitney	y U Two-Sample Test										
Control	vs Group	Test			P-Value	P-Type	Decision	າ(α:5%)			
Negative Conti		18	NA		1.0000	Exact	_	nificant Effect			
	0.0721	18	NA		1.0000	Exact	_	nificant Effect			
	0.2111	21	NA		0.5000	Exact	_	nificant Effect	t		
	0.6474*	30	NA		0.0303	Exact	Significa				
	1.9699*	36	NA	0 10	0.0011	Exact	Significa	nt Effect			
ANOVA Table											
Source	Sum Squares	Mean	Square	DF	F Stat	P-Value	Decision	η(α:5%)			
Between	3.578889	0.715	7778	5	39.8	<0.0001	Significa	nt Effect			
Error	0.54	0.018		30	_						
Total	4.118889			35							
Distributional	Tests										
Attribute	Test		Test Stat	Critical	P-Value	Decision	η(α:1%)				
Variances	Mod Levene E	quality of Vari	ance 1.44	3.7	0.2373	Equal Va	riances				
						·					
Variances	Levene Equalit	y of Variance	9.65	3.7	<0.0001	∪nequal	valiances	normal Distribution			
	Levene Equalit Shapiro-Wilk V	=	9.65 0.742	3.7 0.917	<0.0001 <0.0001	•		tion			
	Shapiro-Wilk V	=				•		tion			
Distribution Survival Sumi	Shapiro-Wilk V	Normality	0.742	0.917		•		tion Std Err	CV%	% Effect	
Distribution Survival Sumi Group	Shapiro-Wilk V	Normality	0.742	0.917	<0.0001	Non-norr	mal Distribut		CV%	% Effect	
Distribution Survival Sumi Group 0	Shapiro-Wilk V mary Control Type Cou	Normality	0.742 95% LCL	0.917 95% UCL	<0.0001 Median	Non-norr	mal Distribut Max	Std Err			
Distribution Survival Sumi Group 0 0.024	Shapiro-Wilk V mary Control Type Cou	Normality Int Mean	95% LCL	0.917 95% UCL 1	<0.0001 Median 1	Non-norr Min	mal Distribut Max 1	Std Err	0.0%	0.0%	
Distribution Survival Summ Group 0 0.024 0.0721	Shapiro-Wilk V mary Control Type Cou Negative Control 6 6	Normality Int Mean 1	95% LCL 1 1 1 0.881	95% UCL 1	<0.0001 Median 1 1	Min 1	Max 1	Std Err 0 0	0.0% 0.0%	0.0% 0.0%	
Variances Distribution Survival Summ Group 0 0.024 0.0721 0.2111 0.6474	Shapiro-Wilk V mary Control Type Cou Negative Control 6 6 6	Int Mean 1 1 1	95% LCL 1 1 1 0.881	95% UCL 1 1	<0.0001 Median 1 1 1	Min 1 1 1	Max 1 1 1	Std Err 0 0	0.0% 0.0% 0.0%	0.0% 0.0% 0.0%	

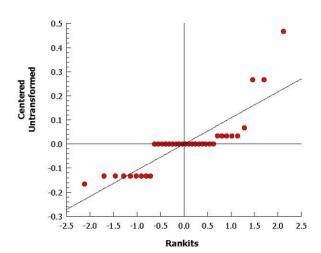
05 Feb-13 16:41 (p 6 of 7) 48718015 Onion | 12-1866-7089

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Wildlife International

Analysis ID:	02-0247-4792	Endpoint:	Survival	CETIS Version:	CETISv1.8.7	
Analyzed:	05 Feb-13 16:40	Analysis:	Nonnarametric-Two Sample	Official Results:	Yes	





Report Date: 05 Feb-13 16:41 (p 7 of 7)

•		N.
Test Code:	48718015 Onion	12-1866-708

							163	st Coue.	407 1001	2 Official 12	2-1000-700
OCSPP 850.4	150 Terrestrial P	Plant Tier	II (Vegetat	ive Vigor)						Wildlife In	ternationa
Analysis ID:	18-8371-4823	Er	ndpoint:	Survival			CE	TIS Version	: CETISv	1.8.7	
Analyzed:	05 Feb-13 16:4	1 A r	nalysis:	Nonparametric-	Control vs	Ord. Treatr	nents Off	icial Result	s: Yes		
Batch ID:	10-8476-1536	Te	st Type: `	Vegetative Vigo	or Tier II		Ana	alyst:			
Start Date:	02 Sep-11			OCSPP 850.41		egetative V		uent:			
	30 Jan-13 16:1			Allium cepa	00110111	ogotati o t	Bri				
Duration:	516d 16h			Park Seed Co.			Age				
Daration.	3100 1011		Juice.	Tark Occa Co.				·			
Sample ID:	16-3286-2333	Co		48718015					MSmith		
Sample Date:	: 02 Sep-11	M	aterial:	Dicamba (#191	8-00-9)		Pro	ject:			
Receive Date	: 30 Jan-13 16:11	7 S c	ource:	BASF Corporat	ion						
Sample Age:	NA	St	ation:								
Data Transfoi	rm	Zeta	Alt Hy	p Trials	Seed			NOEL	LOEL	TOEL	TU
Untransformed	d	NA	C > T	NA	NA			0.0721	0.2111	0.1234	
Jonckheere-1	Terpstra Step-Do	wn Test									
Control	vs Group		Test St	tat Critical	Ties D	F P-Value	P-Type	Decision	າ(α:5%)		
Negative Cont	trol 0.024		0	1.64	1 -2	1.0000	Asymp	Non-Sigr	nificant Effec	t	
	0.0721		0	1.64	1 -2	1.0000	Asymp	Non-Sigr	nificant Effec	t	
	0.2111*		2.02	1.64	1 -2	0.0219	Asymp	Significa	nt Effect		
	0.6474*		3.29	1.64	2 -2	0.0005	Asymp	Significa	nt Effect		
	1.9699*		4.97	1.64	3 -2	<0.0001	Asymp	Significa	nt Effect		
ANOVA Table	•										
Source	Sum Squa	ares	Mean \$	Square	DF	F Stat	P-Value	Decision	າ(α:5%)		
Between	3.578889		0.7157	778	5	39.8	<0.0001	Significa	nt Effect		
Error	0.54		0.018		30						
Total	4.118889				35						
Distributional	l Tests										
Attribute	Test			Test Stat	Critical	P-Value	Decisio	n(α:1%)			
Variances	Mod Leve	ne Equali	ty of Varia	nce 1.44	3.7	0.2373	Equal Va	ariances			
Variances	Levene E	quality of	Variance	9.65	3.7	<0.0001	Unequal	Variances			
Distribution	Shapiro-V	Vilk W No	rmality	0.742	0.917	<0.0001	Non-nor	mal Distribut	tion		
Survival Sum	ımary										
Group	Control Type	Count	Mean	95% LCL	95% UCL	. Median	Min	Max	Std Err	CV%	% Effect
0	Negative Contro	l 6	1	1	1	1	1	1	0	0.0%	0.0%
0.024		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0721		6	1	1	1	1	1	1	0	0.0%	0.0%
0.2111		6	0.967	0.881	1	1	8.0	1	0.0333	8.45%	3.33%
		6	0.733	0.517	0.95	0.6	0.6	1	0.0843	28.2%	26.7%
0.6474 1.9699		6	0.733	0.517	0.388	0.0	0.0	0.6	0.0043	182.0%	86.7%

Report Date:

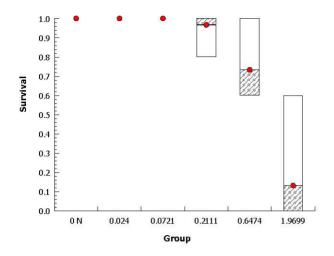
05 Feb-13 16:41 (p 8 of 7)

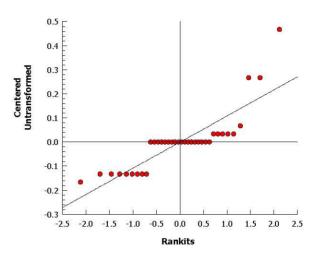
Test Code: 48718015 Onion | 12-1866-7089

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Wildlife International

Analysis ID:	18-8371-4823	Endpoint:	Survival	CETIS Version:	CETISv1.8.7
Analyzed:	05 Feb-13 16:41	Analysis:	Nonnarametric-Control vs Ord Treatments	Official Results:	Yes





Report Date:

05 Feb-13 16:41 (p 9 of 7)

•		Test Code:	48718015 Onion 12-1866-7089

OCSPP 850.4	150 Terrestrial Plant	Wildlife International			
Analysis ID:	00-6805-0864	Endpoint:	Weight	CETIS Version:	CETISv1.8.7
Analyzed:	05 Feb-13 16:40	Analysis:	Nonparametric-Two Sample	Official Results:	Yes
Batch ID:	10-8476-1536	Test Type:	Vegetative Vigor Tier II	Analyst:	
Start Date:	02 Sep-11	Protocol:	OCSPP 850.4150 Plant Vegetative Vigor	Diluent:	
Ending Date:	30 Jan-13 16:17	Species:	Allium cepa	Brine:	
Duration:	516d 16h	Source:	Park Seed Co.	Age:	
Sample ID: Sample Date: Receive Date: Sample Age:	16-3286-2333 02 Sep-11 30 Jan-13 16:17 NA	Code: Material: Source: Station:	48718015 Dicamba (#1918-00-9) BASF Corporation	Client: CDM Project:	Smith

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	44.1%	0.0721	0.2111	0.1234	

01111411010111104		· · ·					0.0121 0.2111 0.1201
Mann-Whitney U T	wo-Sample Test						
Control vs	Group	Test Stat	Critical	Ties	DF P-Value	P-Type	Decision(α:5%)
Negative Control	0.024	21.5	NA	1	10 0.3117	Exact	Non-Significant Effect
	0.0721	20.5	NA	1	10 0.3690	Exact	Non-Significant Effect
	0.2444*	22	NIA	0	10 0 0076	Event	Significant Effect

Course	Sum Sausras	Maan C		DE	E Ctat	D Volus	Desision/suffit)
ANOVA Table							
	1.9699*	12	NA	0	6 0.0357	Exact	Significant Effect
	0.6474*	36	NA	0	10 0.0011	Exact	Significant Effect
	0.2111*	33	NA	0	10 0.0076	Exact	Significant Effect
	0.0121	20.0		•			rton olganisant Entot

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.1972401	0.03944801	5	10.3	<0.0001	Significant Effect
Error	0.09970517	0.003834814	26			
Total	0.2969452		31			

Distributional T	ests				
Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	18.2	15.1	0.0027	Unequal Variances
Distribution	Shapiro-Wilk W Normality	0.959	0.908	0.2524	Normal Distribution

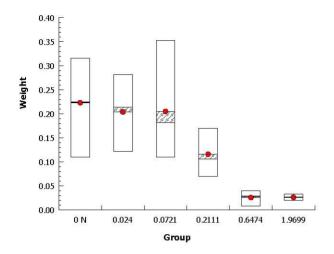
Weight Su	mmary										
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Мах	Std Err	CV%	% Effect
0	Negative Control	6	0.223	0.137	0.309	0.224	0.11	0.316	0.0336	36.9%	0.0%
0.024		6	0.204	0.146	0.261	0.214	0.122	0.282	0.0225	27.0%	8.67%
0.0721		6	0.205	0.107	0.303	0.182	0.11	0.352	0.0383	45.7%	8.07%
0.2111		6	0.116	0.0793	0.153	0.106	0.07	0.17	0.0143	30.1%	48.0%
0.6474		6	0.0257	0.0137	0.0377	0.0285	0.008	0.04	0.00467	44.5%	88.5%
1.9699		2	0.0265	-0.0561	0.109	0.0265	0.02	0.033	0.0065	34.7%	88.1%

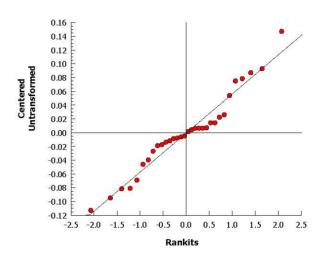
05 Feb-13 16:41 (p 10 of 7) 48718015 Onion | 12-1866-7089

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Wildlife International

Analysis ID:	00-6805-0864	Endpoint:	Weight	CETIS Version:	CETISv1.8.7	
Analyzed:	05 Feb-13 16:40	Analysis:	Nonnarametric-Two Sample	Official Results:	Yes	





Report Date:

05 Feb-13 16:41 (p 11 of 7)

-		**	
Test Code:	48718015 Onion	12-1866-7	089

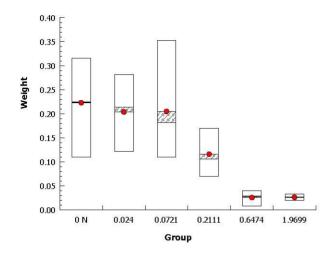
	•							Test	Code:	48718013	5 Onion 1:	2-1866-708
OCSPP 850.	4150 Terrestrial Pla	nt Tier II	(Vegetativ	ve Vigor)							Wildlife In	ternational
Analysis ID:	07-0980-6612	End	point: W	/eight				CET	IS Version:	CETISv1	.8.7	
Analyzed:	05 Feb-13 16:41	Ana	lysis: N	onparametric-	Control	vs C	ord. Treatm	ents Offi c	cial Results	: Yes		
Batch ID:	10-8476-1536	Tes	t Type: V	egetative Vigo	r Tier II			Ana	lyst:			
Start Date:	02 Sep-11	Pro	tocol: O	CSPP 850.41	50 Plant	Veg	getative Vig	or Dilu	ent:			
Ending Date	: 30 Jan-13 16:17	Spe	cies: Al	llium cepa				Brin	e:			
Duration:	516d 16h	Sou	rce: Pa	ark Seed Co.				Age	:			
Sample ID:	16-3286-2333	Coc	le: 48	8718015				Clie	nt: CDN	//Smith		
Sample Date	e: 02 Sep-11	Mat	erial: D	icamba (#191	8-00-9)			Proj	ect:			
Receive Date	e: 30 Jan-13 16:17	Sou	rce: B	ASF Corporat	ion							
Sample Age:	: NA	Stat	ion:									
Data Transfo	orm Z	eta	Alt Hyp	Trials	Seed				NOEL	LOEL	TOEL	TU
Untransforme	ntransformed NA		C > T	NA	NA				0.0721	0.2111	0.1234	
Jonckheere-	-Terpstra Step-Dowr	Test										
Control	vs Group		Test Sta	nt Critical	Ties	DF	P-Value	P-Type	Decision((α:5%)		
Negative Con	ntrol 0.024		0.562	1.64	1			Asymp	Non-Signi	ficant Effect	İ	
	0.0721		0.648	1.64	2		0.2586	Asymp	_	ficant Effect		
	0.2111*		2.68	1.64	2	-2	0.0037	Asymp	Significan	t Effect		
	0.6474*		4.53	1.64	2	-2	<0.0001	Asymp	Significan	t Effect		
	1.9699*		4.86	1.64	2	-2	<0.0001	Asymp	Significan	t Effect		
ANOVA Tabl	е											
Source	Sum Square	s	Mean So	quare	DF		F Stat	P-Value	Decision((α:5%)		
Between	0.1972401		0.03944	801	5		10.3	<0.0001	Significan	t Effect		
Error	0.09970517		0.00383	1011	~~							
			0.00000	4014	26		_					
Total	0.2969452		0.00000	4014	31		_					
			0.00000	4014			_					
Distribution			0.0000	Test Stat		nl	P-Value	Decision	(α:1%)			
Distributiona Attribute	al Tests	ality of V			31	nl	P-Value 0.0027		(α:1%) Variances			
Distributiona Attribute Variances	al Tests Test	_	ariance	Test Stat	31 Critica	ıl		Unequal '	<u> </u>			
Distributiona Attribute Variances Distribution	al Tests Test Bartlett Equ Shapiro-Will	_	ariance	Test Stat	Critica	ıl	0.0027	Unequal '	Variances			
Distributiona Attribute Variances Distribution Weight Sum	Tests Test Bartlett Equi	_	ariance nality M ean	Test Stat	31 Critica 15.1 0.908		0.0027 0.2524 Median	Unequal '	Variances	Std Err	CV%	% Effect
Distributional Attribute Variances Distribution Weight Sum Group	Tests Test Bartlett Equipoler Shapiro-Willer mary Control Type Negative Control 6	c W Norr	ariance nality Mean 0.223	Test Stat 18.2 0.959 95% LCL 0.137	31 Critica 15.1 0.908 95% U 0.309		0.0027 0.2524 Median 0.224	Unequal Normal D Min 0.11	Variances vistribution Max 0.316	0.0336	36.9%	0.0%
Distributional Attribute Variances Distribution Weight Sum Group 0 0.024	Tests Test Bartlett Equipoler Shapiro-Will Test Shapiro-Will Test Test Control Type Negative Control 6	W Norr	mality Mean 0.223 0.204	Test Stat 18.2 0.959 95% LCL 0.137 0.146	21 Critica 15.1 0.908 95% U 0.309 0.261		0.0027 0.2524 Median	Unequal Normal D Min 0.11 0.122	Wariances iistribution Max 0.316 0.282	0.0336 0.0225	36.9% 27.0%	0.0% 8.67%
Distributional Attribute Variances Distribution Weight Sum Group 0 0.024	Tests Test Bartlett Equipoler Shapiro-Willer mary Control Type Negative Control 6	W Norr	ariance nality Mean 0.223	Test Stat 18.2 0.959 95% LCL 0.137	31 Critica 15.1 0.908 95% U 0.309		0.0027 0.2524 Median 0.224	Unequal Normal D Min 0.11	Variances vistribution Max 0.316	0.0336	36.9%	0.0%
Distributiona Attribute Variances Distribution Weight Sum Group 0 0.024 0.0721	Tests Test Bartlett Equipoler Shapiro-Will Test Shapiro-Will Test Test Control Type Negative Control 6	c W Norr	mality Mean 0.223 0.204	Test Stat 18.2 0.959 95% LCL 0.137 0.146	21 Critica 15.1 0.908 95% U 0.309 0.261		0.0027 0.2524 Median 0.224 0.214	Unequal Normal D Min 0.11 0.122	Wariances iistribution Max 0.316 0.282	0.0336 0.0225	36.9% 27.0%	0.0% 8.67%
Total Distributiona Attribute Variances Distribution Weight Sum Group 0 0.024 0.0721 0.2111 0.6474	Test Test Bartlett Equipality Shapiro-Will mary Control Type Negative Control 6 6	c W Norr	Mean 0.223 0.204 0.205	Test Stat 18.2 0.959 95% LCL 0.137 0.146 0.107	21 Critica 15.1 0.908 95% U 0.309 0.261 0.303	CL	0.0027 0.2524 Median 0.224 0.214 0.182	Min 0.11 0.122 0.11	Wariances iistribution Max 0.316 0.282 0.352	0.0336 0.0225 0.0383	36.9% 27.0% 45.7%	0.0% 8.67% 8.07%

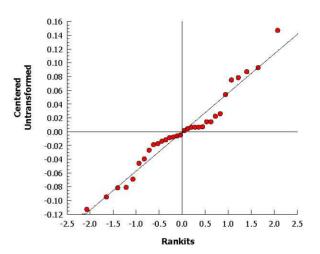
05 Feb-13 16:41 (p 12 of 7) 48718015 Onion | 12-1866-7089

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Wildlife International

Analysis ID:07-0980-6612Endpoint:WeightCETIS Version:CETIS V1.8.7Analyzed:05 Feb-13 16:41Analysis:Nonparametric-Control vs Ord. TreatmentsOfficial Results:Yes





1.9699

6

0.133

0

Report Date: Test Code: 05 Feb-13 16:42 (p 1 of 2) 48718015 Onion | 12-1866-7089

									Te	est Code:	4871801	5 Onion	12-1866-70
OCSPP 85	50.4150 T	errestrial P	Plant Ti	er II (Veg	etative	Vigor)						Wildlife	Internationa
Analysis I		7998-1010		Endpoin					_	ETIS Version:	CETISv′	1.8.7	
Analyzed:	05	Feb-13 16:4	·0	Analysis	: Lin	ear Regress	ion (MLE)		0	fficial Results	: Yes		
Batch ID:	10-8	3476-1536		Test Typ	e: Ve	getative Vigo	or Tier II		A	nalyst:			
Start Date	: 02 8	Sep-11		Protocol	: 00	SPP 850.41	50 Plant Ve	egetative Vigo	or D	luent:			
Ending Da	ate: 30 c	Jan-13 16:1	7	Species:	Alli	um cepa			В	rine:			
Duration:	516	d 16h		Source:	Par	k Seed Co.			A	ge:			
Sample ID		3286-2333		Code:		718015					//Smith		
Sample D				Material:		amba (#191	*		Pi	oject:			
		Jan-13 16:1		Source:	BA	SF Corporat	ion						
Sample A	ge: NA			Station:									
Linear Re	gression	Options											
Model Fu		A . D*I (V)1				d Option reshold		Optimized			Weighted	d	
		4+B*log(X)]		Col	itroi ir	resnoia	1E-07	No	No	No	Yes		
Regressio			DIC	na		Ciama	V4: D3	E 64-4	Critica	L D.Value	Di.i	(F0/)	
	. L 33.8	AICc 72	BIC 74.8	-0 ()296	Sigma 0.314	Adj R2 0.799	F Stat 0.743	Critica 2.69	0.5700	Decision Non-Sign	i(α:5%) iificant Lac	ck of Fit
Point Esti			. 1.0			0.011		0.1 10	2.00	0.0100	Tron digit		
Level	mates	95% LCL	95% l	IICI									
	.285	0.15	0.405										
	.37	0.219	0.502										
	.574	0.402	0.737										
EC50 0	.934	0.727	1.22										
Regressio	n Param	eters											
Paramete		Estimate	Std E	rror 95%	6 LCL	95% UCL	t Stat	P-Value	Decisi	on(α:5%)			
Slope		3.19	0.546	2.1	2	4.26	5.83	<0.0001	Signific	ant Parameter			
Intercept		0.0943	0.175	-0.2	248	0.437	0.539	0.5934	Non-Si	gnificant Paran	neter		
ANOVA T	able												
Source		Sum Squa	ares	Mean Sq	uare	DF	F Stat	P-Value	Decisi	on(α:5%)			
Model		105.8498		105.8498		1	140	<0.0001	Signific	ant			
Lack of Fit		2.310772		0.577693		4	0.743	0.5702	Non-Si	gnificant			
Pure Error		23.31927		0.777309		30							
Residual		25.63004		0.753825	ı	34							
Residual <i>i</i>	Analysis												
Attribute		Method				Test Stat		P-Value		on(α:5%)			
Goodness	-of-Fit	Pearson C				25.6	48.6 48.6	0.8485		gnificant Heter gnificant Heter	0 ,		
Variances		Likelihood Mod Lever			riance	24 1.04	48.6 2.53	0.8984 0.4140		gnificant Heter /ariances	ogenity		
variances Distribution	n	Shapiro-W		-	nance	0.79	2.55 0.94	<0.0001		ranances rmal Distributio	on		
_ iothbutiOi	•	Anderson-		-	ality	3.44	2.49	<0.0001		rmal Distribution			
Survival S	Summarv				-		Calcu	ılated Variat	e(A/B)				
Group	_	ol Type	Coun	t Me	an	Min	Max	Std Err	Std De	v CV%	% Effect	Α	В
0		ive Control	6	1		1	1	0	0	0.0%	0.0%	30	30
0.024			6	1		1	1	0	0	0.0%	0.0%	30	30
0.0721			6	1		1	1	0	0	0.0%	0.0%	30	30
0.2111			6	0.9	67	0.8	1	0.0333	0.0816	8.45%	3.33%	29	30
0.6474			6	0.7		0.6	1	0.0843	0.207	28.2%	26.7%	22	30
1.0000			c	0.4	22	Δ	0.6	0.0000	0.242	102.004	06 70/	4	20

0.0989

0.242

86.7%

4

182.0%

30

0.6

05 Feb-13 16:42 (p 2 of 2) 48718015 Onion | 12-1866-7089

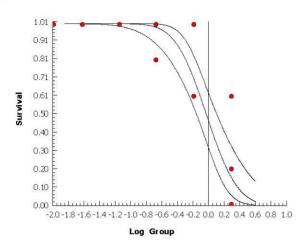
OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

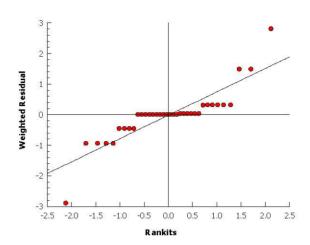
Wildlife International

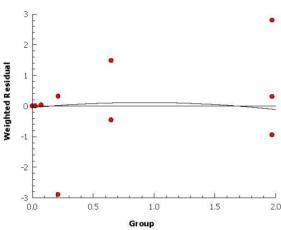
Analysis ID:01-7998-1010Endpoint:SurvivalCETIS Version:CETIS V1.8.7Analyzed:05 Feb-13 16:40Analysis:Linear Regression (MLE)Official Results:Yes

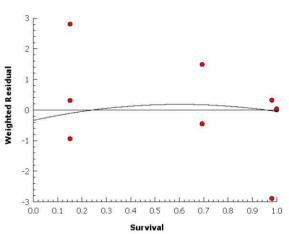
Graphics

Log-Normal [NED=A+B*log(X)]









0.0721

0.2111

0.6474

1.9699

6

6

6

2

29.8

25.4

15.5

13.2

19.6

11.7

11

Report Date: 05 Feb-13 16:42 (p 1 of 4) Test Code: 48718015 Onion | 12-1866-7089

OCSPP 850,4150 Terrestrial Plant Tier II (Vegetative Vigor) Wildlife International Analysis ID: 06-0139-0694 Endpoint: Heiaht **CETIS Version:** CETISv1.8.7 Analyzed: 05 Feb-13 16:40 Analysis: Nonlinear Regression Official Results: Yes 10-8476-1536 Batch ID: Test Type: Vegetative Vigor Tier II Analyst: OCSPP 850.4150 Plant Vegetative Vigor Diluent: Start Date: 02 Sep-11 Protocol: Ending Date: 30 Jan-13 16:17 Species: Allium cepa Brine: **Duration:** 516d 16h Source: Park Seed Co. Age: Sample ID: 16-3286-2333 Code: 48718015 Client: **CDMSmith** Sample Date: 02 Sep-11 Material: Dicamba (#1918-00-9) Project: Receive Date: 30 Jan-13 16:17 Source: **BASF** Corporation Sample Age: NA Station: Non-Linear Regression Options **Model Function** X Transform Y Transform Weighting Function **PTBS Function** 3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))] None None Poisson [W=1/Y] Off [Y*=Y] **Regression Summary** Log LL **AICc** BIC F Stat Critical Iters Adj R2 Optimize P-Value Decision(a:5%) 18 1800 -3590 -3590 0.7262 Yes 3.98 2.98 0.0186 Significant Lack of Fit Point Estimates Level 95% LCL 95% UCL IC5 0.051 0.101 N/A IC10 0.0981 0.0434 0.163 IC25 0.293 0.199 0.41 IC50 0.987 0.737 1.32 **Regression Parameters Parameter Estimate** Std Error 95% LCL 95% UCL t Stat P-Value Decision(a:5%) 30.2 1.23 27.7 32.6 24.4 <0.0001 Α Significant Parameter С 1.8 0.332 1.15 2.45 5.43 <0.0001 Significant Parameter D 0.648 < 0.0001 0.987 0.173 1.33 5.7 Significant Parameter **ANOVA Table** DF Source **Sum Squares** Mean Square F Stat P-Value Decision(a:5%) Model 41.59687 41.59687 1 84.2 < 0.0001 Significant Lack of Fit 4.503656 1.501219 3 3.98 0.0186 Significant Pure Error 9.817408 0.377593 26 29 Residual 14.32106 0.49383 Residual Analysis **Attribute** Test Stat Critical P-Value Decision(a:5%) Method Goodness-of-Fit Pearson Chi-Sq GOF 14.3 42.6 0.9896 Non-Significant Heterogenity Likelihood Ratio GOF 14.4 42.6 0.9892 Non-Significant Heterogenity Variances Bartlett Equality of Variance 1.81 11.1 0.8742 Equal Variances Mod Levene Equality of Variance 0.337 2.59 0.8859 Equal Variances Distribution Shapiro-Wilk W Normality 0.989 0.934 0.9797 Normal Distribution Anderson-Darling A2 Normality 0.197 2.49 0.9349 Normal Distribution Calculated Variate **Height Summary Control Type** Min Std Err Std Dev % Effect Group Count Mean Max CV% 0 Negative Control 29 6 25.4 33.4 1.15 2.82 0.0% 9.72% 0.024 6 29.2 26 32.4 0.967 2.37 8.1% -0.81% 27

CETIS™ v1.8.7.4 000-503-186-1 Analyst:_____ QA:_

34.6

29.6

19.7

15.3

1.29

1.38

1.21

2.15

3.17

3.39

2.96

3.04

10.6%

13.3%

19.2%

23.1%

-2.76%

12.4%

46.7%

54.7%

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Test Code:

48718015 Onion | 12-1866-7089

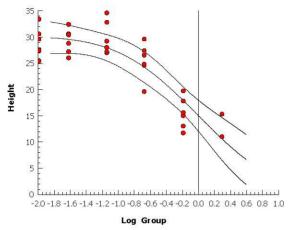
OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

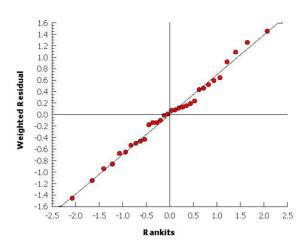
Wildlife International

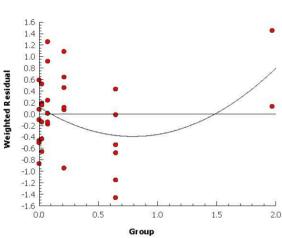
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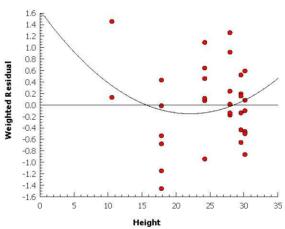
Graphics

3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]









05 Feb-13 16:42 (p 3 of 4)

OCCORD 050 4450 Townsofriel Bland Tow II (Managed Alice)		Mildlife Indonestican
	Test Code:	48718015 Onion 12-1866-7089

OCSPP 850.41	Wildlife International				
Analysis ID: Analyzed:	19-1063-3159 05 Feb-13 16:40	Endpoint: Analysis:	Weight Nonlinear Regression	CETIS Version: Official Results:	CETISv1.8.7 Yes
Batch ID: Start Date: Ending Date: Duration:	10-8476-1536 02 Sep-11 30 Jan-13 16:17 516d 16h	,,	Vegetative Vigor Tier II OCSPP 850.4150 Plant Vegetative Vigor Allium cepa Park Seed Co.	Analyst: Diluent: Brine: Age:	
Sample ID: Sample Date: Receive Date:	30 Jan-13 16:17	Code: Material: Source:	48718015 Dicamba (#1918-00-9) BASF Corporation	Client: CDM Project:	Smith

Sample Age: NA Station:

Non-Linear Regression Options

Model Function	X Transform	Y Transform	Weighting Function	PTBS Function
3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]	None	None	Poisson [W=1/Y]	Off [Y*=Y]
			•	

Regression Summary

Iters	Log LL	AICc	BIC	Adj R2	Optimize	F Stat	Critical	P-Value	Decision(α:5%)
10	-12.9	32.7	36.2	0.6384	Yes	2.72	2.98	0.0652	Non-Significant Lack of Fit

Point Estimates

Level		95% LCL	95% UCL
IC5	0.028	N/A	0.0742
IC10	0.0438	N/A	0.0898
IC25	0.0924	0.0402	0.161
IC50	0.212	0.139	0.323

Regression Parameters

Parameter	Estimate	Std Error	95% LCL	95% UCL	t Stat	P-Value	Decision(α:5%)
Α	0.226	0.0239	0.179	0.273	9.42	<0.0001	Significant Parameter
С	1.23	0.289	0.663	1.8	4.25	0.0002	Significant Parameter
D	0.212	0.0641	0.0862	0.337	3.3	0.0025	Significant Parameter

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Model	1.339862	1.339862	1	56.7	<0.0001	Significant
Lack of Fit	0.163457	0.054485	3	2.72	0.0652	Non-Significant
Pure Error	0.521452	0.020056	26			
Residual	0.684908	0.023618	29			

Residual Analysis

Method	Test Stat	Critical	P-Value	Decision(α:5%)
Pearson Chi-Sq GOF	0.685	42.6	1.0000	Non-Significant Heterogenity
Likelihood Ratio GOF	0.643	42.6	1.0000	Non-Significant Heterogenity
Bartlett Equality of Variance	8.22	11.1	0.1443	Equal Variances
Mod Levene Equality of Variance	1.28	2.59	0.3021	Equal Variances
Shapiro-Wilk W Normality	0.952	0.934	0.1631	Normal Distribution
Anderson-Darling A2 Normality	0.684	2.49	0.0741	Normal Distribution
	Pearson Chi-Sq GOF Likelihood Ratio GOF Bartlett Equality of Variance Mod Levene Equality of Variance Shapiro-Wilk W Normality	Pearson Chi-Sq GOF 0.685 Likelihood Ratio GOF 0.643 Bartlett Equality of Variance 8.22 Mod Levene Equality of Variance 1.28 Shapiro-Wilk W Normality 0.952	Pearson Chi-Sq GOF 0.685 42.6 Likelihood Ratio GOF 0.643 42.6 Bartlett Equality of Variance 8.22 11.1 Mod Levene Equality of Variance 1.28 2.59 Shapiro-Wilk W Normality 0.952 0.934	Pearson Chi-Sq GOF 0.685 42.6 1.0000 Likelihood Ratio GOF 0.643 42.6 1.0000 Bartlett Equality of Variance 8.22 11.1 0.1443 Mod Levene Equality of Variance 1.28 2.59 0.3021 Shapiro-Wilk W Normality 0.952 0.934 0.1631

Weight Su	ummary		Calculated Variate						
Group	Control Type	Count	Mean	Min	Мах	Std Err	Std Dev	CV%	% Effect
0	Negative Control	6	0.223	0.11	0.316	0.0336	0.0822	36.9%	0.0%
0.024		6	0.204	0.122	0.282	0.0225	0.055	27.0%	8.67%
0.0721		6	0.205	0.11	0.352	0.0383	0.0937	45.7%	8.07%
0.2111		6	0.116	0.07	0.17	0.0143	0.035	30.1%	48.0%
0.6474		6	0.0257	0.008	0.04	0.00467	0.0114	44.5%	88.5%
1.9699		2	0.0265	0.02	0.033	0.0065	0.00919	34.7%	88.1%

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Test Code:

48718015 Onion | 12-1866-7089

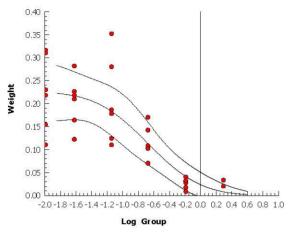
OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

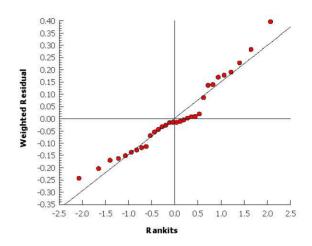
Wildlife International

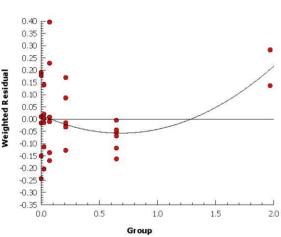
Analysis ID:19-1063-3159Endpoint:WeightCETIS Version:CETIS V1.8.7Analyzed:05 Feb-13 16:40Analysis:Nonlinear RegressionOfficial Results:Yes

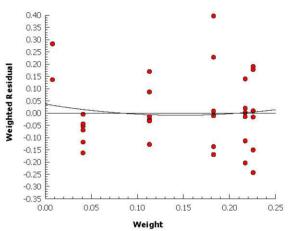
Graphics

3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]









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Test Code:

48718015 Onion | 12-1866-7089

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)
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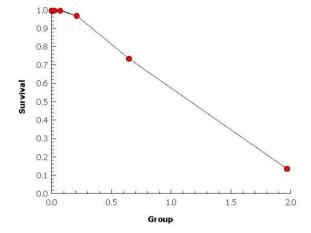
Wildlife International

Analysis ID: Analyzed:	17-1391-2216 05 Feb-13 16:40	Endpoint: Analysis:	Survival Trimmed Spearman-Kärber	CETIS Version: Official Results:	CETISv1.8.7 Yes
Batch ID: Start Date: Ending Date: Duration:	10-8476-1536 02 Sep-11 30 Jan-13 16:17 516d 16h	Test Type: Protocol: Species: Source:	Vegetative Vigor Tier II OCSPP 850.4150 Plant Vegetative Vigor Allium cepa Park Seed Co.	Analyst: Diluent: Brine: Age:	
Sample ID: Sample Date: Receive Date: Sample Age:	16-3286-2333 02 Sep-11 30 Jan-13 16:17 NA	Code: Material: Source: Station:	48718015 Dicamba (#1918-00-9) BASF Corporation	Client: CDM Project:	Smith

Trimmed Spearman-Kärber Estimates

Threshold Option	Threshold	Trim	Mu	Sigma	EC50	95% LCL	95% UCL
Control Threshold	0	13.33%	-0.0164	0.0619	0.963	0.724	1.28

Survival Summary			8 <u>0.</u>	Tr.							
Group	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	% Effect	Α	В
0	Negative Control	6	1	1	1	0	0	0.0%	0.0%	30	30
0.024		6	1	1	1	0	0	0.0%	0.0%	30	30
0.0721		6	1	1	1	0	0	0.0%	0.0%	30	30
0.2111		6	0.967	8.0	1	0.0333	0.0816	8.45%	3.33%	29	30
0.6474		6	0.733	0.6	1	0.0843	0.207	28.2%	26.7%	22	30
1.9699		6	0.133	0	0.6	0.0989	0.242	182.0%	86.7%	4	30



CETIS Summary Report

Report Date: Test Code:

05 Feb-13 16:47 (p 1 of 3)

CE IIS Sull	ппагу кероп						Test Code: 48718015 Rape 11-5425-98
OCSPP 850.41	I50 Terrestrial Plan	t Tier II (Vegeta	ative Vigor)				Wildlife Internation
Batch ID: Start Date: Ending Date: Duration:	12-3918-2593 10 Aug-11 31 Jan-13 13:29 540d 13h	Test Type: Protocol: Species: Source:	Vegetative Vigo OCSPP 850.41 Brassica napus Seedland Inc.	50 Plant Ve	getative Vig	or	Analyst: Diluent: Brine: Age:
Sample ID: Sample Date: Receive Date: Sample Age:	31 Jan-13 13:29	Code: Material: Source: Station:	48718015 Dicamba (#1918 BASF Corporati	,			Client: CDMSmith Project:
Comparison S	Summary						
Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	J Method
15-1853-1636	Height	0.211	3 >0.2113	NA	10.0%		Dunnett Multiple Comparison Test
06-3021-9516	Height	0.211	3 >0.2113	NA	7.81%		Williams Multiple Comparison Test
16-9307-2766	Survival	0.022	4 0.0661	0.03848	NA		Jonckheere-Terpstra Step-Down Test
19-8532-3059	Survival	0.211	3 >0.2113	NA	4.93%		Mann-Whitney U Two-Sample Test
12-4802-6411	Weight	0.066	1 0.2113	0.1182	19.2%		Dunnett Multiple Comparison Test
12-8044-5477	Weight	0.066	1 0.2113	0.1182	15.0%		Williams Multiple Comparison Test
Point Estimate	e Summary						
Analysis ID	Endpoint	Level		95% LCL	95% UCL	TU	J Method
18-2946-4999	Height	IC5	23.3	N/A	1.55E+09		Nonlinear Regression
		IC10	9950	N/A	7E+21		
		IC25	24700000		N/A		
		IC50	18800000		N/A		
01-0318-3640	Survival	EC5	0.243	N/A	N/A		Linear Regression (MLE)
		EC10	0.615	N/A	N/A		
		EC25	2.9	N/A	N/A		
		EC50	16.3	N/A	N/A		
13-6512-8476	Weight	IC5	0.0146	N/A	0.038		Nonlinear Regression
		IC10	0.0326	0.00736	0.0701		
		IC25	0.125	0.0754	0.193		

IC50

0.554

0.185

1.66

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48718015 Rape | 11-5425-9861

OCSPP 850.4150 Terrestrial Plant Tier II (Veg	∣etative Vigor)
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Wildlife International

Height Su	Height Summary														
Group	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect				
0	Sol∨ent Blank	6	34.5	31.5	37.5	31.2	38	1.17	2.87	8.31%	0.0%				
0	Negative Control	6	35.4	32.4	38.3	31.8	38.6	1.14	2.8	7.92%	-2.51%				
0.0026		6	35.8	32.1	39.4	30.4	40.8	1.42	3.49	9.75%	-3.67%				
0.0076		6	35.1	31.6	38.6	30.8	39	1.36	3.33	9.51%	-1.64%				
0.0224		6	35.3	33.6	37.1	33.6	37.6	0.677	1.66	4.69%	-2.42%				
0.0661		6	34.3	32.1	36.4	30.6	36.4	0.831	2.03	5.94%	0.68%				
0.2113		6	34.3	32.4	36.3	32	36.2	0.748	1.83	5.33%	0.48%				

Survival Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Solvent Blank	6	0.967	0.881	1	0.8	1	0.0333	0.0816	8.45%	0.0%
0	Negative Control	6	1	1	1	1	1	0	0	0.0%	-3.45%
0.0026		6	1	1	1	1	1	0	0	0.0%	-3.45%
0.0076		6	1	1	1	1	1	0	0	0.0%	-3.45%
0.0224		6	1	1	1	1	1	0	0	0.0%	-3.45%
0.0661		6	0.967	0.881	1	8.0	1	0.0333	0.0816	8.45%	0.0%
0.2113		6	0.967	0.881	1	0.8	1	0.0333	0.0816	8.45%	0.0%

Weight Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Sol∨ent Blank	6	5.17	3.99	6.35	4.19	7.3	0.459	1.12	21.7%	0.0%
0	Negative Control	6	4.93	4.32	5.54	4.48	6.08	0.236	0.578	11.7%	4.58%
0.0026		6	5.27	4.13	6.41	4.55	7.32	0.443	1.09	20.6%	-2.03%
0.0076		6	4.83	4.05	5.61	4.03	5.89	0.305	0.748	15.5%	6.52%
0.0224		6	4.68	4.07	5.29	3.95	5.43	0.238	0.584	12.5%	9.42%
0.0661		6	4.23	3.71	4.74	3.84	5.01	0.201	0.493	11.7%	18.2%
0.2113		6	3.39	2.81	3.97	2.44	4.15	0.226	0.554	16.3%	34.4%

CETIS Summary Report

Report Date:

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Test Code: 48718015 Rape | 11-5425-9861

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) Wildlife International

Height Det	Height Detail										
Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6				
0	Solvent Blank	33.6	34.4	32	31.2	38	37.8				
0	Negative Control	38.6	37	31.8	32.2	37.2	35.4				
0.0026		37.6	30.4	35.6	34	36.2	40.8				
0.0076		33	30.8	33.6	35	39	39				
0.0224		34.8	34.2	33.6	37.6	34.6	37.2				
0.0661		35.8	33.8	30.6	34.4	36.4	34.6				
0.2113		35.8	32	32.6	33.6	35.8	36.2				

Survival Detail

Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	1	1	1	1	0.8	1
0	Negative Control	1	1	1	1	1	1
0.0026		1	1	1	1	1	1
0.0076		1	1	1	1	1	1
0.0224		1	1	1	1	1	1
0.0661		1	0.8	1	1	1	1
0.2113		1	0.8	1	1	1	1

Weight Detail

Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	4.59	4.79	4.67	4.19	7.3	5.46
0	Negative Control	4.88	4.68	4.74	4.72	4.48	6.08
0.0026		4.72	4.76	4.55	4.6	7.32	5.68
0.0076		4.03	4.94	4.43	4.19	5.89	5.5
0.0224		4.43	5.3	3.95	5.43	4.69	4.28
0.0661		3.86	4.13	4.65	3.87	5.01	3.84
0.2113		4.15	3.4	3.51	3.55	3.28	2.44

CETIS Analytical Report

Report Date: 05 Feb-13 16:45 (p 1 of 7)

,,,,,	Test Code:	48718015 Rape 11-5425-9861

OCSPP 850.41	150 Terrestrial Plant	Tier II (Vegeta	ative Vigor)		Wildlife International
Analysis ID:	15-1853-1636	Endpoint:	Height Parametric-Control vs Treatments	CETIS Version:	CETISv1.8.7
Analyzed:	05 Feb-13 16:44	Analysis:		Official Results:	Yes
Batch ID:	12-3918-2593	Test Type:	Vegetative Vigor Tier II	Analyst:	
Start Date:	10 Aug-11	Protocol:	OCSPP 850.4150 Plant Vegetative Vigor	Diluent:	
Ending Date:	31 Jan-13 13:29	Species:	Brassica napus	Brine:	
Duration:	540d 13h	Source:	Seedland Inc.	Age:	
Sample ID: Sample Date: Receive Date: Sample Age:	17-5645-9864 10 Aug-11 31 Jan-13 13:29 NA	Code: Material: Source: Station:	48718015 Dicamba (#1918-00-9) BASF Corporation	Client: CDN Project:	ISmith

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	10.0%	0.2113	>0.2113	NA	

Dunnett Multiple Comparison Test												
Control vs	Group	Test Stat	Critical	MSD	DF P-Value	P-Type	Decision(α:5%)					
Negative Control	0.0026	-0.264	2.34	3.54	10 0.8997	CDF	Non-Significant Effect					
	0.0076	0.198	2.34	3.54	10 0.7682	CDF	Non-Significant Effect					
	0.0224	0.022	2.34	3.54	10 0.8267	CDF	Non-Significant Effect					
	0.0661	0.726	2.34	3.54	10 0.5446	CDF	Non-Significant Effect					
	0.2113	0.682	2.34	3.54	10 0.5648	CDF	Non-Significant Effect					

ANOVA Table						
Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	10.90222	2.180444	5	0.316	0.8993	Non-Significant Effect
Error	206.84	6.894667	30			
Total	217.7422		35			

Distributional Tests											
Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)						
Variances	Bartlett Equality of Variance	4.53	15.1	0.4760	Equal Variances						
Distribution	Shapiro-Wilk W Normality	0.986	0.917	0.9155	Normal Distribution						

Height Su	leight Summary													
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	% Effect			
0	Negative Control	6	35.4	32.4	38.3	36.2	31.8	38.6	1.14	7.92%	0.0%			
0.0026		6	35.8	32.1	39.4	35.9	30.4	40.8	1.42	9.75%	-1.13%			
0.0076		6	35.1	31.6	38.6	34.3	30.8	39	1.36	9.51%	0.85%			
0.0224		6	35.3	33.6	37.1	34.7	33.6	37.6	0.677	4.69%	0.09%			
0.0661		6	34.3	32.1	36.4	34.5	30.6	36.4	0.831	5.94%	3.11%			
0.2113		6	34.3	32.4	36.3	34.7	32	36.2	0.748	5.33%	2.92%			

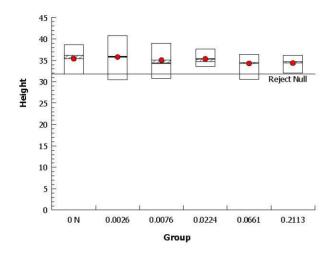
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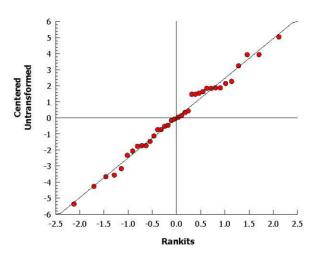
48718015 Rape | 11-5425-9861

OCSPP 850.4150 Terrestrial Plant Tier II (Vegeta	live Vigor)	į
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Wildlife International

Analysis ID:	15-1853-1636	Endpoint:	Height	CETIS Version:	CETISv1.8.7
Analyzed:	05 Feb-13 16:44	Analysis:	Darametric-Control vs Treatments	Official Regulter	Vec





05 Feb-13 16:45 (p 3 of 7)

 Test Code:	48718015 Rape 11-5425-9861

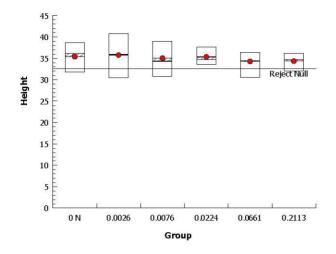
									t Code:			1-5425-986
OCSPP 850.	4150 Terrestrial I	Plant Tie	er II (Vegeta	ative Vigor)							Wildlife In	iternational
Analysis ID:	06-3021-9516	I	Endpoint:	Height				CE	ΠS Version:	CETISv1	.8.7	
Analyzed:	05 Feb-13 16:4	14 /	Analysis:	Parametric-Co	ntrol vs (Ord.1	reatments	Offi	cial Results	: Yes		
Batch ID:	12-3918-2593		Test Type:	Vegetative Vig	or Tier II			Ana	lyst:			
Start Date:	10 Aug-11	ı	Protocol:	OCSPP 850.4	150 Plan	t Ve	getative Vig	or Dil u	ient:			
Ending Date	: 31 Jan-13 13:2	9 ;	Species:	Brassica napu	s			Brin	ne:			
Duration:	540d 13h	;	Source:	Seedland Inc.				Age):			
Sample ID:	17-5645-9864	(Code:	48718015				Clie	nt: CDI	MSmith		
Sample Date: 10 Aug-11 Mater				Dicamba (#19	18-00-9)			Pro	ject:			
Receive Date	e: 31 Jan-13 13:2	9 ;	Source:	BASF Corpora	tion							
Sample Age:	: NA		Station:									
Data Transfo		Zeta	Alt H		Seed			PMSD	NOEL	LOEL	TOEL	TU
Untransforme	ed	NA	C > T	NA	NA			7.81%	0.2113	>0.2113	NA	
Williams Mu	Itiple Compariso	n Test										
Control	vs Group		Test	Stat Critical	MSD	DF	P-Value	P-Type	Decision	(α:5%)		
Negative Control 0.0026			-0.264	1.7	2.57	10	>0.05	CDF	Non-Sign	ficant Effect	İ	
	0.0076		0.198	1.78	2.69	10	>0.05	CDF	Non-Sign	ificant Effect	t	
	0.0224		0.11	1.8	2.73	10	>0.05	CDF	Non-Sign	ficant Effect	t	
	0.0661		0.726	1.81	2.75	10	>0.05	CDF	Non-Sign	ficant Effect	!	
	0.2113		0.704	1.82	2.76	10	>0.05	CDF	Non-Sign	ficant Effect	t	
ANOVA Tabl	е											
Source				_			F Stat	B Value	Decision	(a:5%)		
Oodice	Sum Squ	uivs	INICALI	Square	DF		· Otal	P-Value	Decision	Non-Significant Effect		
	10.90222	uios	2.180		5 5		0.316	0.8993		<u> </u>	•	
Between	10.90222 206.84	u. 03		444	5 30					<u> </u>		
Between Error	10.90222	ui 03	2.180	444	5					<u> </u>	:	
Between Error Total	10.90222 206.84 217.7422		2.180	444	5 30					<u> </u>		
Between Error Total Distributio na	10.90222 206.84 217.7422	<u> </u>	2.180	444	5 30 35	al			Non-Signi	<u> </u>		
Between Error Total Distributiona Attribute	10.90222 206.84 217.7422 al Tests		2.180	444 667	5 30 35	al	0.316	0.8993	Non-Signi n(α:1%)	<u> </u>		
Between Error Total Distributiona Attribute Variances	10.90222 206.84 217.7422 al Tests Test Bartlett E	quality c	2.180 6.894	444 667 Test Stat	5 30 35 Critica	al	0.316 P-Value	0.8993 Decision Equal Va	Non-Signi n(α:1%)	<u> </u>		
Between Error Total Distributiona Attribute Variances Distribution	10.90222 206.84 217.7422 al Tests Test Bartlett E Shapiro-V	quality c	2.180 6.894 of Variance	444 667 Test Stat 4.53	5 30 35 Critica	al	0.316 P-Value 0.4760	0.8993 Decision Equal Va	Non-Signi n(α:1%) riances	<u> </u>		
Between Error Total Distributiona Attribute Variances Distribution Height Sumr	10.90222 206.84 217.7422 al Tests Test Bartlett E Shapiro-V mary Control Type	Equality of Wilk W N	2.180 6.894 of Variance Normality	Test Stat 4.53 0.986	5 30 35 Critica 15.1 0.917		0.316 P-Value 0.4760 0.9155 Median	Decision Equal Va Normal D	Non-Signi n(α:1%) triances Distribution	ficant Effect	CV%	%Effect
Between Error Total Distributiona Attribute Variances Distribution Height Sumr Group	10.90222 206.84 217.7422 al Tests Test Bartlett E Shapiro-V	Equality c Wilk W N Count Ol 6	2.180 6.894 of Variance Normality t Mean 35.4	Test Stat 4.53 0.986 95% LCL 32.4	5 30 35 Critica 15.1 0.917 95% U		P-Value 0.4760 0.9155 Median 36.2	Decision Equal Va Normal D	Non-Signi n(α:1%) riances Distribution Max 38.6	Std Err	CV% 7.92%	0.0%
Between Error Total Distributiona Attribute Variances Distribution Height Sumr Group 0 0.0026	10.90222 206.84 217.7422 al Tests Test Bartlett E Shapiro-V mary Control Type	Equality of Wilk W N Count 01 6 6	2.180 6.894 of Variance Normality t Mean 35.4 35.8	Test Stat 4.53 0.986 95% LCL 32.4 32.1	5 30 35 Critica 15.1 0.917 95% U 38.3 39.4		P-Value 0.4760 0.9155 Median 36.2 35.9	Decision Equal Va Normal E	Non-Signi n(α:1%) riances Distribution Max 38.6 40.8	Std Err 1.14 1.42	CV% 7.92% 9.75%	0.0% -1.13%
Between Error Total Distributiona Attribute Variances Distribution Height Sumr Group 0 0.0026	10.90222 206.84 217.7422 al Tests Test Bartlett E Shapiro-V mary Control Type	Equality c Wilk W N Count Ol 6	2.180 6.894 of Variance Normality t Mean 35.4	Test Stat 4.53 0.986 95% LCL 32.4	5 30 35 Critica 15.1 0.917 95% U		P-Value 0.4760 0.9155 Median 36.2	Decision Equal Va Normal D	Non-Signi n(α:1%) riances Distribution Max 38.6	Std Err	CV% 7.92%	0.0%
Between Error Total Distributiona Attribute Variances Distribution Height Sumr Group 0 0.0026 0.0076	10.90222 206.84 217.7422 al Tests Test Bartlett E Shapiro-V mary Control Type	Equality of Wilk W N Count 01 6 6	2.180 6.894 of Variance Normality t Mean 35.4 35.8	Test Stat 4.53 0.986 95% LCL 32.4 32.1	5 30 35 Critica 15.1 0.917 95% U 38.3 39.4		P-Value 0.4760 0.9155 Median 36.2 35.9	Decision Equal Va Normal E	Non-Signi n(α:1%) riances Distribution Max 38.6 40.8	Std Err 1.14 1.42	CV% 7.92% 9.75%	0.0% -1.13%
Between Error Total Distributiona Attribute Variances Distribution Height Sumr Group 0 0.0026 0.0076 0.0024 0.0661	10.90222 206.84 217.7422 al Tests Test Bartlett E Shapiro-V mary Control Type	Equality of Wilk W N Count 6 6 6	2.180 6.894 of Variance Normality t Mean 35.4 35.8 35.1	Test Stat 4.53 0.986 95% LCL 32.4 32.1 31.6	5 30 35 Critica 15.1 0.917 95% U 38.3 39.4 38.6		P-Value 0.4760 0.9155 Median 36.2 35.9 34.3	Decision Equal Va Normal E Min 31.8 30.4 30.8	Non-Signi n(α:1%) uriances Distribution Max 38.6 40.8 39	Std Err 1.14 1.42 1.36	CV% 7.92% 9.75% 9.51%	0.0% -1.13% 0.85%

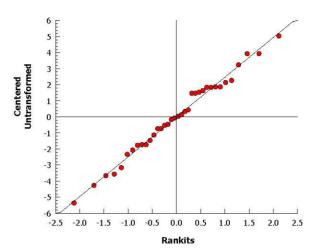
05 Feb-13 16:45 (p 4 of 7) 48718015 Rape | 11-5425-9861

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Wildlife International

Analysis ID:06-3021-9516Endpoint:HeightCETIS Version:CETIS V1.8.7Analyzed:05 Feb-13 16:44Analysis:Parametric-Control vs Ord.TreatmentsOfficial Results:Yes





05 Feb-13 16:45 (p 5 of 7)

, and , and a report	Test Code:	48718015 Rape 11-5425-9861
·		

OCSPP 850.4	1150 Terrestrial Plant	Tier II (Veget	ative Vigor)						Wildlife Ir	nternational
Analysis ID:	19-8532-3059	Endpoint:	Survival			CET	1S Version	: CETISv1	.8.7	
Analyzed:	05 Feb-13 16:44	Analysis:	Nonparametric	-Two Sampl	е	Offi	cial Results	s: Yes		
Batch ID:	12-3918-2593	Test Type:	Vegetative Vige	or Tier II		Ana	lyst:			
Start Date:	10 Aug-11	Protocol:	OCSPP 850.41		getative Vig		ent:			
Ending Date:	31 Jan-13 13:29	Species:	Brassica napus	6		Brin	ie:			
Duration:	540d 13h	Source:	Seedland Inc.			Age	:			
Sample ID:	17-5645-9864	Code:	48718015			Clie	nt: CD	MSmith		
Sample Date:	: 10 Aug-11	Material:	Dicamba (#191	8-00-9)		Proj	ject:			
Receive Date	: 31 Jan-13 13:29	Source:	BASF Corporat	tion						
Sample Age:	NA	Station:								
Data Transfo	rm Zeta	a Alt H	yp Trials	Seed		PMSD	NOEL	LOEL	TOEL	TU
Untransforme	d NA	C > T	NA	NA		4.93%	0.2113	>0.2113	NA	
Mann-Whitne	y U Two-Sample Test									
Control	vs Group	Test	Stat Critical	Ties DF	P-Value	P-Type	Decision	η(α:5%)		
Negative Cont	trol 0.0026	18	NA	1 10	1.0000	Exact	Non-Sigr	nificant Effect	t	
	0.0076	18	NA		1.0000	Exact	Non-Sigr	nificant Effect	t	
	0.0224	18	NA	1 10	1.0000	Exact	Non-Sigr	nificant Effect	t	
	0.0661	21	NA		0.5000	Exact	-	nificant Effect		
	0.2113	21	NA	1 10	0.5000	Exact	Non-Sigr	nificant Effect	t	
ANOVA Table	e									
Source	Sum Squares		an Square DF F Stat			P-Value	Decision(α:5%)			
Between	0.008888889		777778	5	0.8	0.5585	Non-Sigr	nificant Effect	İ	
Error	0.0666667	0.002	222222	30	_					
Total	0.0755556			35						
Distributiona	l Tests									
Attribute	Test		Test Stat		P-Value	Decision	(α:1%)			
Variances	Mod Levene E			3.7	0.5585	Equal Va				
Variances	Levene Equalit	-	5	3.7	0.0019	•	Variances			
Distribution	Shapiro-Wilk V	/ Normality	0.489	0.917	<0.0001	Non-norn	nal Distribut	ion		
Survival Sum	nmary									
Group	Control Type Cou					Min	Мах	Std Err	CV%	% Effect
Group 0	Control Type Cou	1	1	1	1	1	1	0	0.0%	0.0%
Group 0 0.0026	Control Type Cou Negative Control 6 6	1 1	1	1	1	1	1	0	0.0% 0.0%	0.0% 0.0%
Group 0 0.0026 0.0076	Control Type Cou Negative Control 6 6 6	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	0 0 0	0.0% 0.0% 0.0%	0.0% 0.0% 0.0%
Group 0 0.0026 0.0076 0.0224	Control Type Council Regative Control 6 6 6 6 6	1 1 1 1	1 1 1 1	1 1 1 1	1 1 1 1	1 1 1 1	1 1 1 1	0 0 0 0	0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0%
Survival Sum Group 0 0.0026 0.0076 0.0224 0.0661 0.2113	Control Type Cou Negative Control 6 6 6	1 1 1	1 1 1 1 0.881	1 1 1	1 1 1	1 1 1	1 1 1	0 0 0	0.0% 0.0% 0.0%	0.0% 0.0% 0.0%

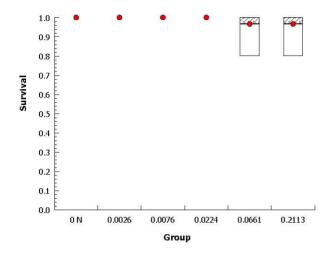
05 Feb-13 16:45 (p 6 of 7)

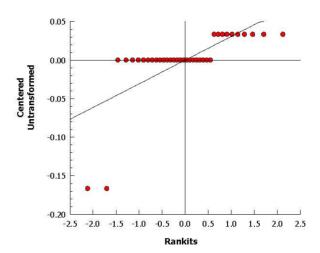
48718015 Rape | 11-5425-9861

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Wildlife International

Analysis ID:19-8532-3059Endpoint:SurvivalCETIS Version:CETISv1.8.7Analyzed:05 Feb-13 16:44Analysis:Nonparametric-Two SampleOfficial Results:Yes





05 Feb-13 16:45 (p 7 of 7)

		•									Test C	ode:	4871801	I5 Rape 11	-5425-986
OCSPP 850.41	50 T	errestrial F	lant T	ier II (Vege	tative	Vigor)								Wildlife Int	ernationa
Analysis ID:	16-9	307-2766		Endpoint:	Sur	∿i∨al				1	CETIS	Version	: CETISv1	.8.7	
Analyzed:	05 F	Feb-13 16:4	4	Analysis:	Noi	nparametric-	Control	vs C	ord. Treatm	ents	Officia	l Results	s: Yes		
Batch ID:	12-3	3918-2593		Test Type:	: Ve	getative Vigo	r Tier I				Analys	st:			
Start Date:	10 A	\ug-11		Protocol:	00	SPP 850.41	50 Plar	it Ve	getati∨e Vig	gor	Diluen	t:			
Ending Date:	31 J	an-13 13:2	Э	Species:	Bra	ssica napus					Brine:				
Duration:	540	d 13h		Source:	See	edland Inc.					Age:				
Sample ID:	17-5	645-9864		Code:	487	.8718015 Client: CDMS						MSmith			
Sample Date:	10 A	\ug-11		Material:	Dic	amba (#191	8-00-9)				Projec	t:			
Receive Date:	31 J	an-13 13:2	€	Source:	BA	SF Corporat	ion								
Sample Age:	NA			Station:											
Data Transforr	n		Zeta	Alt I	Нур	Trials	Seed					NOEL	LOEL	TOEL	TU
Untransformed			NA	C > -	Γ	NA	NA					0.0224	0.0661	0.03848	
Jonckheere-Te	erpst	ra Step-Do	wn Te	st											
Control	VS	Group		Test	Stat	Critical	Ties	DF	P-Value	Р-Ту	ре	Decision	ι(α:5%)		
Negative Contro	ol	0.0026		0		1.64	1	-2	1.0000	Asym	np	Non-Sign	ificant Effect	t	
		0.0076		0		1.64	1	-2	1.0000	Asym	ıр	Non-Sign	ificant Effect	t	
		0.0224		0		1.64	1	-2	1.0000	Asym	ıр	Non-Sign	ificant Effect	t	
		0.0661*		1.9		1.64	1	-2	0.0288	Asym	ıp	Significar	nt Effect		
		0.2113*		1.85		1.64	2	-2	0.0319	Asym	ıp	Significar	nt Effect		
ANOVA Table															
Source		Sum Squa	ares	Mea	ո Sqւ	uare	DF		F Stat	P-Val	lue	Decision	ι(α:5%)		
Between		0.0088888	89	0.00	17777	778	5		0.8	0.558	35	Non-Sign	ificant Effect	t	
Error	0.06666667 0.00222		22222	222	30		_								
Total		0.0755555	6				35								
Distributional	Test	s													
Attribute		Test				Test Stat	Critic	al	P-Value	Decis	sion(α	:1%)			
Variances		Mod Leve	ne Eq	uality of Var	iance	0.8	3.7		0.5585	Equa	l Varia	nces			
								•							

Levene Equality of Variance

Shapiro-Wilk W Normality

Variances

Distribution

Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	% Effect
0	Negative Contro	6	1	1	1	1	1	1	0	0.0%	0.0%
0.0026		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0076		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0224		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0661		6	0.967	0.881	1	1	0.8	1	0.0333	8.45%	3.33%
0.2113		6	0.967	0.881	1	1	0.8	1	0.0333	8.45%	3.33%

0.0019

< 0.0001

Unequal Variances

Non-normal Distribution

3.7

0.917

5

0.489

000-503-186-1 CETIS™ v1.8.7.4 Analyst:_____ QA:____

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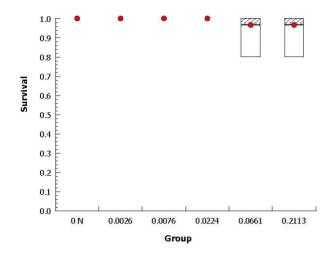
Test Code:

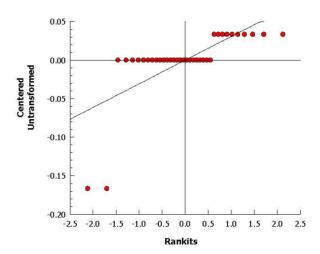
48718015 Rape | 11-5425-9861

OCSPP 850.4150 Terre	estrial Plant	Tier II (V	egetative	Vigor)
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Wildlife International

Analysis ID:	16-9307-2766	Endpoint:	Survival	CETIS Version:	CETISv1.8.7
Analyzed:	05 Feb-13 16:44	Analysis:	Nonnarametric-Control vs Ord Treatments	Official Results:	Yes





CETIS Analytical Report

6

6

6

0.0224

0.0661

0.2113

4.07

3.71

2.81

4.68

4.23

3.39

Report Date:

05 Feb-13 16:45 (p 9 of 7)

 Test Code:	48718015 Rape 11-5425-9861

OCSPP 850.4	150 T	errestrial Pl	ant T	ier II (\	∕egetat	ive \	√igor)								Wildlife In	ternational
Analysis ID:	12-4	802-6411		Endp	oint: \	Weig	jht					CET	IS Version:	CETISv1	.8.7	
Analyzed:	05 F	eb-13 16:44	ļ	Analy	sis:	Para	metric-Con	trol vs ⁻	reat	tments		Offic	ial Results	: Yes		
Batch ID:	12-3	918-2593		Test T	Type: \	Vege	tative Vigo	r Tier II				Anal	yst:			
Start Date:	10 A	\ug-11		Proto	col: (ocs	PP 850.41	50 Plan	t Ve	getative Vig	or	Dilue	ent:			
Ending Date:	31 J	an-13 13:29		Speci	ies:	Bras	sica napus					Brin	e:			
Duration:	540	d 13h		Sourc	ce: S	Seed	lland Inc.					Age:				
Sample ID:	17-5	645-9864		Code	: 4	4871	8015					Clier	nt: CDI	MSmith		
Sample Date:	10 A	\ug-11		Mater	ial: [Dica	mba (#191	8-00-9)				Proje	ect:			
Receive Date	: 31 J	an-13 13:29		Source	ce: E	BAS	F Corporat	ion								
Sample Age:	NA			Static	n:											
Data Transfor	m		Zeta		Alt Hy	р	Trials	Seed			PMS	D	NOEL	LOEL	TOEL	TU
Untransformed	dt		NA		C > T		NA	NA			19.2	%	0.0661	0.2113	0.1182	
Dunnett Multi	ple C	omparison	Test													
Control	vs	Group			Test St	tat	Critical	MSD	DF	P-Value	P-Ty	ре	Decision	(α:5%)		
Negative Cont	rol	0.0026			-0.842		2.34	0.947	10	0.9747	CDF		Non-Sign	ificant Effect		
		0.0076			0.246		2.34	0.947	10	0.7503	CDF		_	ificant Effect		
		0.0224			0.616		2.34	0.947	10	0.5947	CDF		Non-Sign	ificant Effect		
		0.0661			1.73		2.34			0.1537	CDF		Non-Sign	ificant Effect		
		0.2113*			3.8		2.34	0.947	10	0.0015	CDF		Significan	t Effect		
ANOVA Table)															
Source		Sum Squa	res		Mean S	Squa	ıre	DF		F Stat	P-Va	lue	Decision	(α:5%)		
Between		13.28639			2.6572	78		5		5.38	0.00	12	Significan	t Effect		
Error		14.8129			0.4937	634		30		_						
Total		28.09929						35								
Distributional	Test	s														
Attribute		Test					Test Stat	Critica	al	P-Value	Deci	sion	(α:1%)			
Variances		Bartlett Ed	uality	of Var	iance		4.43	15.1		0.4894	Equa	al Var	iances			
Distribution		Shapiro-W	/ilk W	Norma	ality		0.924	0.917		0.0164	Norr	nal Di	istribution			
Weight Sumn	nary															
Group	Cont	rol Type	Cou	nt	Mean		95% LCL	95% L	CL	Median	Min		Мах	Std Err	CV%	% Effect
0	Nega	tive Control	6		4.93		4.32	5.54		4.73	4.48		6.08	0.236	11.7%	0.0%
0.0026			6		5.27		4.13	6.41		4.74	4.55		7.32	0.443	20.6%	-6.93%
0.0076			6		4.83		4.05	5.61		4.68	4.03		5.89	0.305	15.5%	2.03%

4.56

4

3.45

3.95

3.84

2.44

5.43

5.01

4.15

5.29

4.74

3.97

0.238

0.201

0.226

5.07%

14.3%

31.3%

12.5%

11.7%

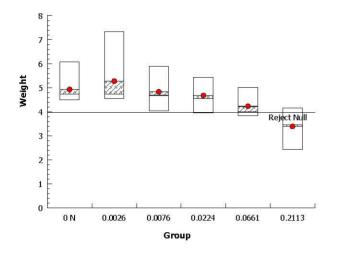
16.3%

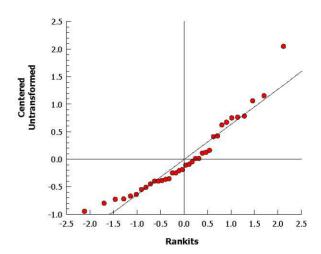
05 Feb-13 16:45 (p 10 of 7) 48718015 Rape | 11-5425-9861

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Wildlife International

Analysis ID:	12-4802-6411	Endpoint:	Weight	CETIS Version:	CETISv1.8.7	
Analyzed:	05 Feb-13 16:44	Analysis:	Parametric-Control vs Treatments	Official Results:	Yes	





CETIS Analytical Report

Report Date:

05 Feb-13 16:45 (p 11 of 7)

,	 Test Code:	48718015 Rape 11-5425-9861

OCSPP 850.41	OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)								
Analysis ID:	12-8044-5477	Endpoint:	Weight Parametric-Control vs Ord.Treatments	CETIS Version:	CETISv1.8.7				
Analyzed:	05 Feb-13 16:44	Analysis:		Official Results:	Yes				
Batch ID:	12-3918-2593	Test Type:	Vegetative Vigor Tier II	Analyst:					
Start Date:	10 Aug-11	Protocol:	OCSPP 850.4150 Plant Vegetative Vigor	Diluent:					
Ending Date:	31 Jan-13 13:29	Species:	Brassica napus	Brine:					
Duration:	540d 13h	Source:	Seedland Inc.	Age:					
Sample ID: Sample Date: Receive Date: Sample Age:	17-5645-9864 10 Aug-11 31 Jan-13 13:29 NA	Code: Material: Source: Station:	48718015 Dicamba (#1918-00-9) BASF Corporation	Client: CDM Project:	Smith				

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU	
Untransformed	NA	C > T	NA	NA	15.0%	0.0661	0.2113	0.1182		

Williams Multiple Comparison Test

Control vs	Group	Test Stat	Critical	MSD	DF P-Value	P-Type	Decision(α:5%)
Negative Control	0.0026	-0.842	1.7	0.688	10 >0.05	CDF	Non-Significant Effect
	0.0076	0.246	1.78	0.721	10 >0.05	CDF	Non-Significant Effect
	0.0224	0.616	1.8	0.731	10 >0.05	CDF	Non-Significant Effect
	0.0661	1.73	1.81	0.736	10 >0.05	CDF	Non-Significant Effect
	0.2113*	3.8	1.82	0.739	10 < 0.05	CDF	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	13.28639	2.657278	5	5.38	0.0012	Significant Effect
Error	14.8129	0.4937634	30			
Total	28.09929		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	4.43	15.1	0.4894	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.924	0.917	0.0164	Normal Distribution

Weight Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	% Effect
0	Negative Control	6	4.93	4.32	5.54	4.73	4.48	6.08	0.236	11.7%	0.0%
0.0026		6	5.27	4.13	6.41	4.74	4.55	7.32	0.443	20.6%	-6.93%
0.0076		6	4.83	4.05	5.61	4.68	4.03	5.89	0.305	15.5%	2.03%
0.0224		6	4.68	4.07	5.29	4.56	3.95	5.43	0.238	12.5%	5.07%
0.0661		6	4.23	3.71	4.74	4	3.84	5.01	0.201	11.7%	14.3%
0.2113		6	3.39	2.81	3.97	3.45	2.44	4.15	0.226	16.3%	31.3%

000-503-186-1 CETIS™ v1.8.7.4 Analyst:_____ QA:____

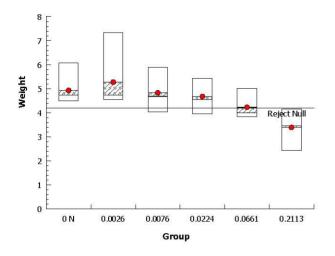
05 Feb-13 16:45 (p 12 of 7)

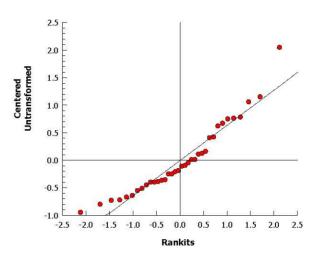
Test Code: 48718015 Rape | 11-5425-9861

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Wildlife International

Analysis ID:	12-8044-5477	Endpoint:	Weight	CETIS Version:	CETISv1.8.7
Analyzed:	05 Feb-13 16:44	Analysis:	Parametric-Control vs Ord.Treatments	Official Results:	Yes





0.2113

6

0.967

8.0

Report Date: Test Code: 05 Feb-13 16:45 (p 1 of 2) 48718015 Rape I 11-5425-9861

							res	t Code:	487180	io Rape I	11-5425-98
OCSPP 850.41	50 Terrestrial P	Plant Tier II	(Vegeta	tive Vigor)						Wildlife	Internation
Analysis ID:	01-0318-3640	End	lpoint:	Survival			CE	TIS Version:	CETISV	1.8.7	
Analyzed:	05 Feb-13 16:4		•	Linear Regress	sion (MLE)			icial Results			
Batch ID:	12-3918-2593	Tes	t Tyne:	Vegetative Vig	or Tier II		An:	alyst:			
	10 Aug-11			OCSPP 850.4		egetative Vig		uent:			
	31 Jan-13 13:2:		cies:	Brassica napus		ogotativo vig	Bri				
Duration:	540d 13h	•	irce:	Seedland Inc.	•		Age				
							, ng				
Sample ID:	17-5645-9864	Cod		48718015					//Smith		
Sample Date:	-		erial:	Dicamba (#191	*		Pro	ject:			
	31 Jan-13 13:2		ırce:	BASF Corpora	tion						
Sample Age:	NA	Sta	tion:								
Linear Regress	sion Options										
Model Function			Thres	hold Option	Threshold	l Optimized	d Pooled	Het Corr	Weighte	d	
Log-Normal [NE	ED=A+B*log(X)]		Contro	ol Threshold	1E-07	No	No	No	Yes		
Regression Su	ımmary										
lters LL	AICc	BIC	Mu	Sigma	Adj R2	F Stat	Critical	P-Value	Decision	(α:5%)	
11 -9.25	22.9	25.7	1.21	1.11	0.532	3.83	2.69	0.0124	Significar	nt Lack of	Fit
Point Estimate	S										
Level	95% LCL	95% UCL									
EC5 0.243	N/A	N/A									
EC10 0.615	N/A	N/A									
EC25 2.9	N/A	N/A									
EC50 16.3	N/A	N/A									
Regression Pa	rameters										
Parameter	Estimate	Std Error	95% L	CL 95% UCL	t Stat	P-Value	Decisio	n(α:5%)			
Slope	0.9	0.681	-0.434	2.24	1.32	0.1950	Non-Sig	nificant Paran	neter		
Intercept	-1.09	0.746	-2.55	0.37	-1.46	0.1526	Non-Sig	nificant Paran	neter		
ANOVA Table											
Source	Sum Squa	ares Mea	an Squa	re DF	F Stat	P-Value	Decisio	n(α:5%)			
Model	18.74985	18.7	74985	1	40.8	<0.0001	Significa	nt			
Lack of Fit	5.287341	1.32	21835	4	3.83	0.0124	Significa	nt			
Pure Error	10.34483	0.34	14828	30							
Residual	15.63217	0.43	5977	34							
Residual Analy	/sis										
Attribute	Method			Test Stat	Critical	P-Value	Decisio	n(α:5 <u>%)</u>			
Goodness-of-Fit	t Pearson C	hi-Sq GOF		15.6	48.6	0.9970	_	nificant Heter			
		Ratio GOF		8.49	48.6	1.0000	_	nificant Heter	ogenity		
Variances		ne Equality			2.53	0.5429	Equal Variances				
Distribution		/ilk W Norm	-	0.451	0.94	<0.0001					
	Anderson-	Darling A2	Normalit	y 7.6	2.49	<0.0001	Non-nor	mal Distribution	on		
Survival Summ	nary				Calcu	ulated Varia	te(A/B)			_	
	ontrol Type	Count	Mean	Min	Мах	Std Err	Std Dev		% Effect	Α	В
	egative Control	6	1	1	1	0	0	0.0%	0.0%	30	30
0.0026		6	1	1	1	0	0	0.0%	0.0%	30	30
0.0076		6	1	1	1	0	0	0.0%	0.0%	30	30
0.0224		6 6	1 0.967	1 0.8	1	0 0.0333	0 0.0816	0.0% 8.45%	0.0% 3.33%	30 29	30 30
0.0661											

0.0333

0.0816

8.45%

3.33%

29

30

1

05 Feb-13 16:45 (p 2 of 2) 48718015 Rape | 11-5425-9861

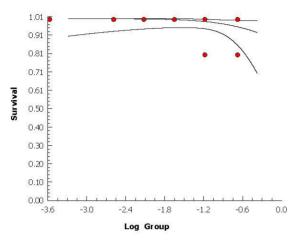
OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

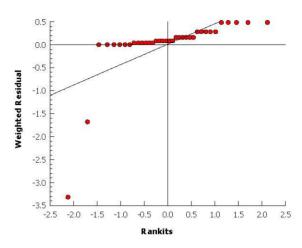
Wildlife International

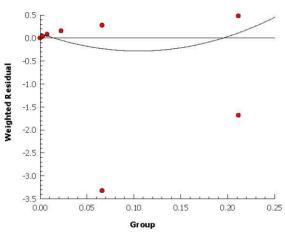
Analysis ID:01-0318-3640Endpoint:SurvivalCETIS Version:CETIS V1.8.7Analyzed:05 Feb-13 16:44Analysis:Linear Regression (MLE)Official Results:Yes

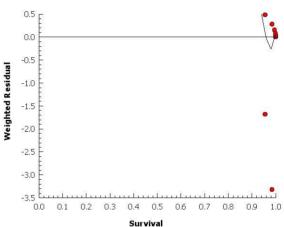
Graphics

Log-Normal [NED=A+B*log(X)]









0.2113

6

34.3

32

CETIS Analytical Report Report Date: Test Code: 48718015 Rape | 11-5425-9861

05 Feb-13 16:45 (p 1 of 4)

OCSPI	P 850.4150 T	errestrial F	Plant Tier II	(Vegetativ	e Vigor)					Wi	Idlife International
Analys Analyz		2946-4999 Feb-13 16:4		-	eight onlinear Regr	ession			IS Version: cial Results:	CETISv1.8. Yes	7
Batch	ID: 12-	3918-2593	Tes	t Type: V∈	getative Vigo	or Tier II		Ana	lyst:		
Start D	Date: 10 /	Aug-11	Pro	tocol: O	CSPP 850.41	50 Plant V	egetative Vig	jor Dil u	ent:		
	g Date: 31		9 Spe		assica napus	i		Brin	e:		
Duratio	on: 540	d 13h	Sou	irce: Se	edland Inc.			Age	:		
Sampl		5645-9864	Cod		718015			Clie		/ISmith	
-	e Date : 10 /	_			camba (#191			Proj	ect:		
	ve Date: 31	Jan-13 13:2			ASF Corporat	ion					
Sampl	e Age: NA		Stat	ion:							
Non-Li	inear Regres	ssion Optio	ons								
	Function					X Trans			Veighting F		PTBS Function
3P Cur	mulative Log-	Normal EV	[Y=A*(1- Φ	(log(X/D)/C))]	None	None	; F	oisson [W=1	I/Y]	Off [Y*=Y]
Regre	ssion Summ	ary			<u></u>						
Iters	Log LL	AICc	BIC	Adj R2	Optimize	F Stat	Critical	P-Value	Decision(α:5%)	
92	3220	-6440	-6430		Yes	0.333	2.92	0.8013	Non-Signi	ficant Lack of I	= it
Point I	Estimates										
Level		95% LCL	95% UCL								
IC5	23.3	N/A	1.55E+09								
IC10	9950	N/A	7E+21								
IC25	24700000	N/A	N/A								
IC50	18800000	N/A	N/A								
Regres	ssion Param	eters									
Param	eter	Estimate		95% LCL		t Stat	P-Value	Decision	<u> </u>		
A		35.6	1.04	33.6	37.7	34.1	<0.0001	•	it Parameter		
C D		16.7	53.5 1.97E+15	-88.1	121 3.89E+15	0.312	0.7572 0.9925	_	ificant Paran ificant Paran		
		1.00E+13	1.37 = 13	-5.5=+15	3.09E+13	0.00932	0.9923	Non-Sign	IIICAIII FAIAII	letei	
ANOV	A Table										
Source	e	Sum Squ		n Square	DF	F Stat	P-Value	Decision			
Model	:-	0.145307		15307	1	0.79	0.3806	Non-Sign			
Lack of		0.195878 5.876075		35293 95869	3 30	0.333	0.8013	Non-Sign	iticant		
Pure E Residu		6.071952		3999	33						
		0.07 1002	0.10								
	ual Analysis										
Attribu		Method	N: 0- 00E		Test Stat		P-Value	Decision	, ,		
Goodn	ess-of-Fit		Chi-Sq GOF		6.07	47.4	1.0000		ificant Hetero		
\			Ratio GOF		6.08	47.4	1.0000		ificant Hetero	ogenity	
Varian	CCS		quality of Va ne Equality		4.47 • 0.819	11.1 2.53	0.4845 0.5458	Equal Va Equal Va			
Distribu	ution		ilk W Norm		0.019	0.94	0.8685	•	istribution		
Distrib	ation		Darling A2		0.304	2.49	0.8995		istribution		
Height	t Summary				•		Ilculated Va				
_	-	ol Turco	Count	Maan	Min				CV0/	% Effort	
Group 0		ol Type ive Control	Count 6	Mean 35.4	Min 31.8	Max 38.6	Std Err 1.14	Std Dev 2.8	7.92%	% Effect 0.0%	
0.0026	_	5 55111 01	6	35.8	30.4	40.8	1.42	3.49	9.75%	-1.13%	
0.0026			6	35.1	30.4	39	1.42	3.33	9.51%	0.85%	
0.0070			6	35.3	33.6	37.6	0.677	1.66	4.69%	0.03%	
0.0661			6	34.3	30.6	36.4	0.831	2.03	5.94%	3.11%	
0.0001			-	00	00.0	00.1	0.501		5.5170	0	

000-503-186-1 CETIS™ v1.8.7.4 Analyst:_____ QA:____

0.748

5.33%

1.83

2.92%

36.2

05 Feb-13 16:45 (p 2 of 4)

Test Code:

48718015 Rape | 11-5425-9861

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Wildlife International

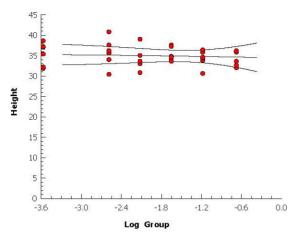
Analysis ID: 18-2946-4999 **Analyzed:** 05 Feb-13 16:44 Endpoint: Height
Analysis: Nonline

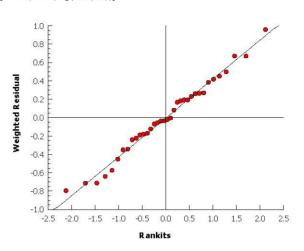
sis: Nonlinear Regression

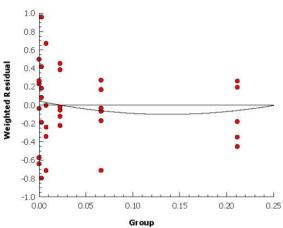
CETIS Version: CETISv1.8.7
Official Results: Yes

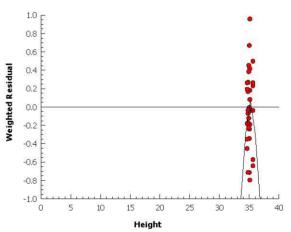
Graphics

3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]









CETIS Analytical Report

Report Date: 05 Feb-13 16:45 (p 3 of 4) **Test Code:** 48718015 Rape | 11-5425-9861 05 Feb-13 16:45 (p 3 of 4)

			-							Tes	t Code:	48718015 Rap	pe 11-5425-9861
OCSPI	P 850.41	50 Te	rrestrial P	lant Ti	er II (Ve	getativ	e Vigor)					Wildl	ife International
Analys			512-8476		Endpoi		-				TIS Version:	CETISv1.8.7	
Analyz	ea:		eb-13 16:4		Analysi		nlinear Regr				icial Results:	res	
Batch	ID:	12-39	918-2593		Test Ty	-	getative Vigo				alyst:		
Start D			ug-11		Protoco	ol: OC	CSPP 850.41	50 Plant V	egetative Vig	or Dil i	uent:		
Ending	g Date:	31 Ja	an-13 13:29	9	Species	s: Bra	assica napus			Bri	ne:		
Duratio	on:	540d	13h		Source	: Se	edland Inc.			Age	e:		
Sampl			345-9864		Code:		718015					1 Smith	
	e Date:		-		Materia		camba (#191			Pro	ject:		
			an-13 13:29		Source		SF Corporat	ion					
Sampl	e Age:	NA			Station	:							
Non-Li	near Re	gress	ion Optio	ns									
	Functio										Weighting Fu		PTBS Function
3P Cur	nulative	Log-N	Iormal EV	[Y=A*(1	1- Ф(log	(X/D)/C)))]	None	None		Poisson [W=1	/Y]	Off [Y*=Y]
Regres	ssion Su	ımma	ry										
Iters	Log L	L	AICc	BIC	A	dj R2	Optimize	F Stat	Critical	P-Value	Decision(α:5%)	
9	86.1		-165	-161	0.	4363	Yes	0.444	2.92	0.7235	Non-Signif	icant Lack of Fit	
Point I	Estimate	s											
Level			95% LCL	95% l	JCL								
IC5	0.0146	6	N/A	0.038									
IC10	0.0326	6	0.00736	0.070	1								
IC25	0.125		0.0754	0.193									
IC50	0.554		0.185	1.66									
Regres	ssion Pa	rame	ters										
Param	eter		Estimate	Std E	rror 9		95% UCL	t Stat	P-Value	Decisio	n(α:5%)		
Α			5.07	0.216		64	5.49	23.5	<0.0001	-	nt Parameter		
С			2.21	0.851	0.	542	3.88	2.6	0.0139	-	nt Parameter		
D			0.554	0.278	0.	01	1.1	2	0.0542	Non-Sig	nificant Param	neter	
ANOV	A Table												
Source	Э		Sum Squa	ares	Mean S	quare	DF	F Stat	P-Value	Decisio	n(α:5%)		
Model			2.890727		2.89072	<u>?</u> 7	1	29.1	<0.0001	Significa	nt		
Lack of	f Fit		0.13929		0.04643	}	3	0.444	0.7235	Non-Sig	nificant		
Pure E	rror		3.139625		0.10465		30						
Residu	al		3.278915		0.09936	51	33						
Residu	ıal Analy	ysis											
Attribu	ite		Method				Test Stat	Critical	P-Value	Decisio	n(α:5%)		
Goodn	ess-of-Fi		Pearson C				3.28	47.4	1.0000	•	nificant Hetero		
			Likelihood				3.16	47.4	1.0000		nificant Hetero	genity	
Variand			Mod Lever	•	-			2.53	0.8930	Equal V			
Distribu	ution		Shapiro-W Anderson-		_		0.911 1.17	0.94 2.49	0.0069 0.0046		mal Distributio mal Distributio		
Wajab	t Summ		,		7.2 1101				alculated Var				
Group		-	l Type	Count	 f RA	ean	Min	Max	Std Err	Std Dev	cV%	% Effect	
0			e Control	6		93	4.48	6.08	0.236	0.578	11.7%	0.0%	
0.0026		Jyuuv	COMMO	6		27	4.55	7.32	0.443	1.09	20.6%	-6.93%	
0.0026				6		83	4.03	5.89	0.305	0.748	15.5%	2.03%	
0.0076				6		68	3.95	5.43	0.238	0.584	12.5%	5.07%	
0.0661				6		23	3.84	5.01	0.201	0.493	11.7%	14.3%	
0.2113				6		39	2.44	4.15	0.226	0.554	16.3%	31.3%	
3.2110				-	٥.								

05 Feb-13 16:45 (p 4 of 4) 48718015 Rape | 11-5425-9861

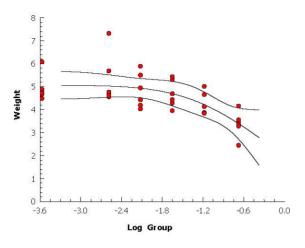
OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

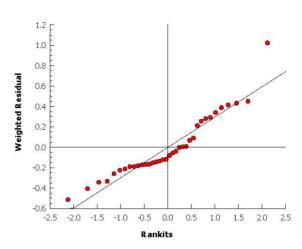
Wildlife International

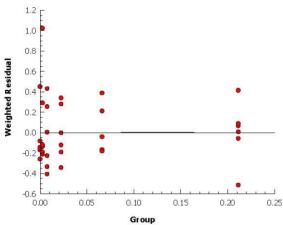
Analysis ID:13-6512-8476Endpoint:WeightCETIS Version:CETISv1.8.7Analyzed:05 Feb-13 16:44Analysis:Nonlinear RegressionOfficial Results:Yes

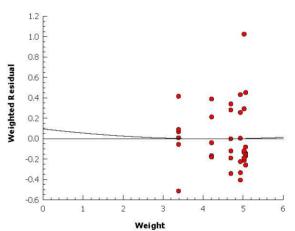
Graphics

3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]









CETIS Summary Report

1.9699

6

0.457

0.404

Report Date:

05 Feb-13 16:49 (p 1 of 2)

48718015 Rye | 06-1311-6585 Test Code: OCSPP 850,4150 Terrestrial Plant Tier II (Vegetative Vigor) Wildlife International Batch ID: 21-1587-7874 Test Type: Vegetative Vigor Tier II Analyst: OCSPP 850.4150 Plant Vegetative Vigor Start Date: 02 Sep-11 Protocol: Diluent: Ending Date: 30 Jan-13 16:30 Species: Lolium perenne Brine: **Duration:** 516d 16h Source: Meyer Seed Co., Baltimore, MD Age: Code: Sample ID: 06-0065-2615 48718015 Client: **CDMSmith** Sample Date: 02 Sep-11 Material: Dicamba (#1918-00-9) Project: Receive Date: 30 Jan-13 16:30 Source: **BASF Corporation** Sample Age: NΑ Station: Comparison Summary Analysis ID **Endpoint** NOEL LOEL **TOEL PMSD** TU Method 00-7986-9827 Height 1.9699 >1.9699 NΑ 8.22% Dunnett Multiple Comparison Test 1.9699 12-8824-6495 Height 0.6474 1.129 6.41% Williams Multiple Comparison Test 12-6089-6700 Survival 1.9699 >1.9699 NΑ Jonckheere-Terpstra Step-Down Test NA 05-0549-4412 Survival 1.9699 >1.9699 NA 3.49% Mann-Whitney U Two-Sample Test 15-0281-3694 Weight 0.0721 0.2111 0.1234 15.0% **Dunnett Multiple Comparison Test** 08-6137-3440 Weight 0.0721 0.2111 0.1234 11.7% Williams Multiple Comparison Test **Point Estimate Summary Endpoint** 95% UCL TU Analysis ID Level 95% LCL Method 18-1859-7945 Height IC5 0.908 0.201 2.22 Nonlinear Regression IC10 3.57 0.167 14.5 IC25 35.1 N/A 2270 IC50 444 N/A N/A 0.0696 12-5004-5154 Weight IC5 0.00432 N/A Nonlinear Regression IC10 0.0462 0.00338 0.254 IC25 2.42 0.428 10.5 IC50 1.06 36800 197 **Height Summary** Group Control Type Count Mean 95% LCL 95% UCL Min Max Std Err Std Dev CV% %Effect 0 Solvent Blank 6 19.2 18.3 20.2 18.4 20.8 0.377 0.924 4.81% 0.0% 0 Negative Control 6 19.7 18.3 21.1 17.4 21 0.546 1.34 6.79% -2.43% 0.024 6 19.7 18.1 21.4 17 21.8 0.634 1.55 7.87% -2.6% 0.0721 6 19.5 18.7 20.3 20.4 0.296 3.71% -1.39% 18 4 0.724 6 18.8 20.3 20.6 0.569 7.4% 2.08% 0.2111 174 17 2 1.39 6 20.6 20.8 -0.35% 0.6474 19.3 17.4 0.497 1.22 6.31% 18 1.9699 6 18.1 17.4 18.8 17 19 0.291 0.713 3.94% 5.89% **Survival Summary** Group Control Type Count Mean 95% LCL 95% UCL Min Max Std Err Std Dev CV% %Effect 0 Solvent Blank 1 1 0 0 0.0% 0.0% 0 Negative Control 6 1 1 1 0 0 0.0% 0.0% 1 1 0 0 0.024 6 1 1 1 1 1 0.0% 0.0% 6 0 0 0.0% 0.0% 0.0721 1 1 1 1 1 6 0 0 1 0.0% 0.0% 0.2111 1 1 1 1 0.6474 6 0.967 0.881 1 0.8 0.0333 0.0816 8.45% 3.33% 1 1.9699 6 1 1 1 1 1 0 0 0.0% 0.0% Weight Summary Group **Control Type** Count Mean 95% LCL 95% UCL Min Max Std Err Std Dev CV% %Effect 0 Solvent Blank 0.585 0.543 0.628 0.548 0.656 0.0166 0.0406 6.94% 0.0% 0 Negative Control 6 0.599 0.56 0.639 0.542 0.654 0.0153 0.0375 6.25% -2.39% 6 0.564 3.7% 0.024 0.485 0.643 0.466 0.65 0.0307 0.0753 13.4% 0.0721 6 0.532 0.447 0.618 0.414 0.664 0.0331 0.0812 15.3% 9.05% 6 0.492 0.448 0.444 0.042 8.55% 15.9% 0.2111 0.536 0.556 0.0172 0.6474 6 0.497 0.401 0.594 0.368 0.624 0.0376 0.092 18.5% 15.1%

000-503-186-1 CETIS™ v1.8.7.4 Analyst:_____ QA:_____

0.372

0.528

0.0208

0.051

11.2%

21.9%

0.511

1.9699

0.46

0.472

0.44

0.472

0.372

0.528

Report Date: Test Code: 05 Feb-13 16:49 (p 2 of 2) 48718015 Rve I 06-1311-6585

							Test Code:	48718015 Rye 06-1311-6585
OCSPP 85	0.4150 Terrestrial P	lant Tier	II (Vegetativ	ve Vigor)				Wildlife International
Height Det	tail							
Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	
0	Solvent Blank	18.4	18.6	19.2	20.8	18.6	19.8	
0	Negative Control	20.2	21	19	20.8	17.4	19.8	
0.024		20.2	21.8	19.8	19.6	20	17	
0.0721		19.4	19.2	20.4	20.2	18.4	19.4	
0.2111		18.4	20.6	20	19.4	17.2	17.4	
0.6474		20	19	17.4	20.8	20	18.6	
1.9699		18.2	17.6	19	17	18.2	18.6	
Survival D	etail							
Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	
0	Solvent Blank	1	1	1	1	1	1	
0	Negative Control	1	1	1	1	1	1	
0.024		1	1	1	1	1	1	
0.0721		1	1	1	1	1	1	
0.2111		1	1	1	1	1	1	
0.6474		1	8.0	1	1	1	1	
1.9699		1	1	1	1	1	1	
Weight De	etail							
Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	
0	Solvent Blank	0.564	0.656	0.608	0.556	0.58	0.548	
0	Negative Control	0.654	0.592	0.622	0.586	0.542	0.6	
0.024		0.466	0.564	0.624	0.65	0.596	0.482	
0.0721		0.414	0.498	0.542	0.664	0.526	0.55	
0.2111		0.444	0.556	0.526	0.458	0.484	0.484	
0.6474		0.574	0.485	0.368	0.624	0.494	0.438	

CETIS Analytical Report

Report Date:

05 Feb-13 16:48 (p 1 of 7)

or the Athany deal respons	Test Code:	48718015 Rye 06-1311-6585

OCSPP 850.41	150 Terrestrial Plant 1	ier II (Vegeta	ative Vigor)		Wildlife International
Analysis ID:	00-7986-9827	Endpoint:	Height	CETIS Version:	CETISv1.8.7
Analyzed:	05 Feb-13 16:48	Analysis:	Parametric-Control vs Treatments	Official Results:	Yes
Batch ID:	21-1587-7874	Test Type:	Vegetative Vigor Tier II	Analyst:	
Start Date:	02 Sep-11	Protocol:	OCSPP 850.4150 Plant Vegetative Vigor	Diluent:	
Ending Date:	30 Jan-13 16:30	Species:	Lolium perenne	Brine:	
Duration:	516d 16h	Source:	Meyer Seed Co., Baltimore, MD	Age:	
Sample ID: Sample Date: Receive Date: Sample Age:	06-0065-2615 02 Sep-11 30 Jan-13 16:30 NA	Code: Material: Source: Station:	48718015 Dicamba (#1918-00-9) BASF Corporation	Client: CDM Project:	Smith

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU	
Untransformed	NA	C > T	NA	NA	8.22%	1.9699	>1.9699	NA		

Dunnett Multiple Comparison Test

Control vs	Group	Test Stat	Critical	MSD	DF P-Value	P-Type	Decision(α:5%)
Negative Control	0.024	-0.0481	2.34	1.62	10 0.8472	CDF	Non-Significant Effect
	0.0721	0.288	2.34	1.62	10 0.7343	CDF	Non-Significant Effect
	0.2111	1.25	2.34	1.62	10 0.3126	CDF	Non-Significant Effect
	0.6474	0.577	2.34	1.62	10 0.6125	CDF	Non-Significant Effect
	1.9699	2.31	2.34	1.62	10 0.0530	CDF	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	11.87222	2.374443	5	1.65	0.1784	Non-Significant Effect
Error	43.28666	1.442889	30			
Total	55.15888		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	4.66	15.1	0.4593	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.975	0.917	0.5784	Normal Distribution

Height Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	% Effect
0	Negative Control	6	19.7	18.3	21.1	20	17.4	21	0.546	6.79%	0.0%
0.024		6	19.7	18.1	21.4	19.9	17	21.8	0.634	7.87%	-0.17%
0.0721		6	19.5	18.7	20.3	19.4	18.4	20.4	0.296	3.71%	1.02%
0.2111		6	18.8	17.4	20.3	18.9	17.2	20.6	0.569	7.4%	4.4%
0.6474		6	19.3	18	20.6	19.5	17.4	20.8	0.497	6.31%	2.03%
1.9699		6	18.1	17.4	18.8	18.2	17	19	0.291	3.94%	8.12%

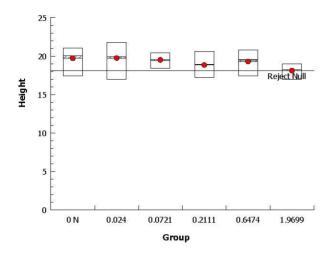
000-503-186-1 CETIS™ v1.8.7.4 Analyst:_____ QA:_____

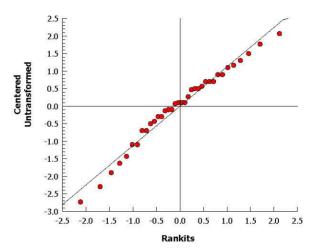
05 Feb-13 16:48 (p 2 of 7) 48718015 Rye | 06-1311-6585

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Wildlife International

Analysis ID:	00-7986-9827	Endpoint:	Height	CETIS Version:	CETISv1.8.7
Analyzed:	05 Feb-13 16:48	Analysis:	Parametric-Control vs Treatments	Official Results:	Yes





CETIS Analytical Report

Report Date: 05 Feb-13 16:48 (p 3 of 7)

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•	Test Code:	48718015 Rye 06-1311-6585

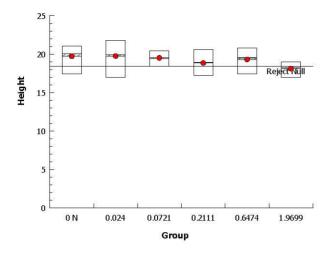
OCSPP 850.4	150 Terrestrial Plant 1	Пег II (Vegetativ	e Vigor)						Wildlife Ir	iternational
Analysis ID: Analyzed:	12-8824-6495 05 Feb-13 16:48	•	ight rametric-Cor	ntrol vs Ord.	Treatments		TIS Version: ficial Results	CETISv1 : Yes	.8.7	
Batch ID: Start Date: Ending Date: Duration:	21-1587-7874 02 Sep-11 30 Jan-13 16:30 516d 16h	Species: Lo	getative Vigo CSPP 850.41 lium perenne eyer Seed Co	50 Plant Ve		or Dil	alyst: uent: ine: e:			
Sample ID: Sample Date: Receive Date: Sample Age:	: 30 Jan-13 16:30	Material: Did	718015 camba (#191 SF Corporat	,			ent: CDI oject:	MSmith		
Data Transfor	rm Zeta	Alt Hyp	Trials	Seed		PMSD	NOEL	LOEL	TOEL	TU
Untransformed	AN b	C > T	NA	NA		6.41%	0.6474	1.9699	1.129	
Williams Mult	tiple Comparison Test	t								
Control	vs Group	Test Stat	Critical	MSD DE	P-Value	P-Type	Decision	(α:5%)		
Negative Cont		-0.0481 0.288 1.25 0.913 2.31	1.7 1.78 1.8 1.81 1.82	1.23 10 1.25 10 1.26 10	>0.05 >0.05 >0.05 >0.05 >0.05 <0.05	CDF CDF CDF CDF	Non-Signi Non-Signi Non-Signi	ficant Effect ficant Effect ficant Effect ficant Effect	: :	
ANOVA Toble										
ANOVA Table Source	Sum Squares	Mean Sq	uare	DF	F Stat	P-Value	e Decision	(α:5%)		
Between	11.87222	2.374443		5	1.65	0.1784	Non-Signi	ficant Effect		
Error Total	43.28666 55.15888	1.442889		30 35	_					
Distributional	Tests									
Attribute	Test		Test Stat	Critical	P-Value	Decisio	n(α:1%)			
Variances	Bartlett Equality	y of Variance	4.66	15.1	0.4593		ariances			
Distribution	Shapiro-Wilk W	/ Normality	0.975	0.917	0.5784	Normal	Distribution			
Height Summ	ary									
Group	Control Type Cou	nt Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	% Effect
0	Negative Control 6	19.7	18.3	21.1	20	17.4	21	0.546	6.79%	0.0%
0.024	6	19.7	18.1	21.4	19.9	17	21.8	0.634	7.87%	-0.17%
0.0721	6	19.5	18.7	20.3	19.4	18.4	20.4	0.296	3.71%	1.02%
0.2111	6	18.8	17.4	20.3	18.9	17.2	20.6	0.569	7.4%	4.4%
0.6474	6	19.3	18	20.6	19.5	17.4	20.8	0.497	6.31%	2.03%
1.9699	6	18.1	17.4	18.8	18.2	17	19	0.291	3.94%	8.12%

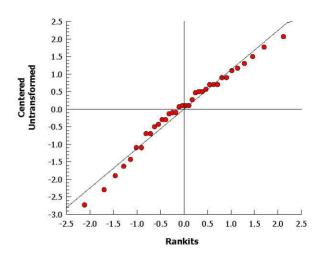
05 Feb-13 16:48 (p 4 of 7) 48718015 Rye | 06-1311-6585

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Wildlife International

Analysis ID:	12-8824-6495	Endpoint:	Height	CETIS Version:	CETISv1.8.7	
Analyzed:	05 Feb-13 16:48	Analysis:	Parametric-Control vs Ord Treatments	Official Results:	Yes	





0.2111

0.6474

1.9699

6

6

1

0.967

Report Date: Test Code: 05 Feb-13 16:48 (p 5 of 7) 48718015 Rye I 06-1311-6585

										Tes	t Code:	487180	015 Rye 0	06-1311-658
OCSPP 850.4	150 T	errestrial P	lant T	ier II ('	Vegetativ	/e Vigor)							Wildlife Ir	nternational
Analysis ID:	05-0	0549-4412		Endp	oint: Si	urvival				CE	IS Version:	CETISv	1.8.7	
Analyzed:	05 1	Feb-13 16:4	8	Analy	ysis: N	onparametric-	Two Sa	mple	;	Offi	cial Results	: Yes		
Batch ID:	21-	1587-7874		Test	Type: V	egetati∨e Vigo	or Tier II			Ana	lyst:			
Start Date:	02 8	Sep-11		Proto	col: O	CSPP 850.41	50 Plan	t Veg	getative Vig	gor Dil u	ent:			
Ending Date:	30 .	Jan-13 16:30	0	Spec	ies: Lo	olium perenne	;			Brir	ne:			
Duration:	516	d 16h		Sour	ce: M	eyer Seed Co	o., Baltin	nore,	MD	Age	:			
Sample ID:	06-0	0065-2615		Code	: 48	3718015				Clie	nt: CD	MSmith		
Sample Date:	02 8	Sep-11		Mate	r ial: Di	camba (#191	8-00-9)			Pro	ject:			
Receive Date:	30 .	Jan-13 16:30	0	Sour	ce: B	ASF Corporat	ion							
Sample Age:	NA			Statio	on:									
Data Transfor	m		Zeta		Alt Hyp	Trials	Seed			PMSD	NOEL	LOEL	TOEL	TU
Untransformed	j		NA		C > T	NA	NA			3.49%	1.9699	>1.9699	NA	
Mann-Whitney	y U T		Test											
Control	VS	Group			Test Sta	t Critical	Ties	DF	P-Value	P-Type	Decision	(α:5%)		
Negative Conti	rol	0.024			18	NA	1	10	1.0000	Exact	Non-Sign	ificant Effec	:t	
		0.0721			18	NA	1	10	1.0000	Exact	Non-Sign	ificant Effec	:t	
		0.2111			18	NA	1	10	1.0000	Exact	Non-Sign	ificant Effec	:t	
		0.6474			21	NA	1	10	0.5000	Exact	Non-Sign	ificant Effec	:t	
		1.9699			18	NA	1	10	1.0000	Exact	Non-Sign	ificant Effec	:t	
ANOVA Table														
Source		Sum Squa	ares		Mean So	quare	DF		F Stat	P-Value	Decision	(α:5%)		
Between		0.0055555	56		0.001111	1111	5		1	0.4346	Non-Sign	ificant Effec	t	
Error		0.0333333	4		0.00111	1111	30		_					
Total		0.0388888	9				35							
Distributional	Test	s												
Attribute		Test				Test Stat	Critica	al	P-Value	Decision	ι(α:1%)			
Variances		Mod Leve	ne Eq	uality	of Variand	e 1	3.7		0.4346	Equal Va	riances			
Variances		Levene E				6.25	3.7		0.0004	Unequal	Variances			
Distribution		Shapiro-V	Vilk W	Norma	ality	0.362	0.917		<0.0001	Non-norr	nal Distributi	on		
Survival Sumi	mary													
Group		trol Type	Cou	nt	Mean	95% LCL	95% L	JCL	Median	Min	Мах	Std Err	CV%	% Effect
	Nega	ative Contro	I 6		1	1	1		1	1	1	0	0.0%	0.0%
0.024			6		1	1	1		1	1	1	0	0.0%	0.0%
0.0721			6		1	1	1		1	1	1	0	0.0%	0.0%
0.0444			^		4	4	4		4	4	4		0.007	0.007

1

1

0.881

1

. 1

0.8

1

1

0

0.0333

0.0%

8.45%

0.0%

0.0%

3.33%

0.0%

05 Feb-13 16:48 (p 6 of 7)

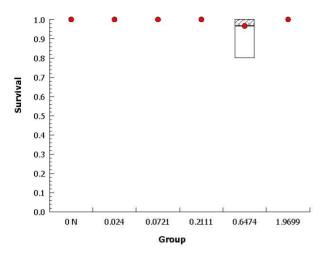
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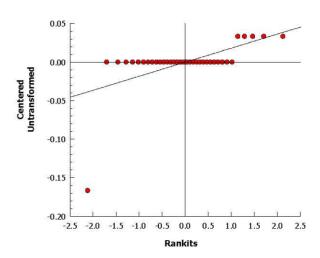
48718015 Rye | 06-1311-6585

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor
--

Wildlife International

Analysis ID:05-0549-4412Endpoint:SurvivalCETIS Version:CETIS V1.8.7Analyzed:05 Feb-13 16:48Analysis:Nonparametric-Two SampleOfficial Results:Yes





05 Feb-13 16:48 (p 7 of 7)

or no many aca	птероп		Test Code:	48718015 Rye 06-1311-6585	5

OCSPP 850.41	I50 Terrestrial Plant T	ier II (Veget	ative Vigor)		Wildlife International
Analysis ID: Analyzed:	12-6089-6700 05 Feb-13 16:48	Endpoint: Analysis:	Survival Nonparametric-Control vs Ord. Treatments	CETIS Version: Official Results:	CETISv1.8.7 Yes
Batch ID: Start Date: Ending Date: Duration:	21-1587-7874 02 Sep-11 30 Jan-13 16:30 516d 16h	Test Type: Protocol: Species: Source:	Vegetative Vigor Tier II OCSPP 850.4150 Plant Vegetative Vigor Lolium perenne Meyer Seed Co., Baltimore, MD	Analyst: Diluent: Brine: Age:	
Sample ID: Sample Date: Receive Date: Sample Age:	06-0065-2615 02 Sep-11 30 Jan-13 16:30 NA	Code: Material: Source: Station:	48718015 Dicamba (#1918-00-9) BASF Corporation	Client: CDM: Project:	Smith

Sample Age: NA

Data Transform	Zeta	Alt Hyp	Trials	Seed	NOEL	LOEL	TOEL	TU	
Untransformed	NA	C > T	NA	NA	1.9699	>1.9699	NA		

Jonckheere-Terpstra Step-Down Test

Control vs	Group	Test Stat	Critical	Ties	DF P-Value	P-Type	Decision(α:5%)
Negative Control	0.024	0	1.64	1	-2 1.0000	Asymp	Non-Significant Effect
	0.0721	0	1.64	1	-2 1.0000	Asymp	Non-Significant Effect
	0.2111	0	1.64	1	-2 1.0000	Asymp	Non-Significant Effect
	0.6474	1.9	1.64	1	-2 0.1339	Asymp	Non-Significant Effect
	1.9699	1.11	1.64	1	-2 0.1339	Asymp	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.00555556	0.001111111	5	1	0.4346	Non-Significant Effect
Error	0.03333334	0.001111111	30			
Total	0.03888889		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Mod Levene Equality of Variance	1	3.7	0.4346	Equal Variances
Variances	Levene Equality of Variance	6.25	3.7	0.0004	Unequal Variances
Distribution	Shapiro-Wilk W Normality	0.362	0.917	<0.0001	Non-normal Distribution

Survival Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	% Effect
0	Negative Control	6	1	1	1	1	1	1	0	0.0%	0.0%
0.024		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0721		6	1	1	1	1	1	1	0	0.0%	0.0%
0.2111		6	1	1	1	1	1	1	0	0.0%	0.0%
0.6474		6	0.967	0.881	1	1	0.8	1	0.0333	8.45%	3.33%
1.9699		6	1	1	1	1	1	1	0	0.0%	0.0%

000-503-186-1 CETIS™ v1.8.7.4 Analyst:_____ QA:____

05 Feb-13 16:48 (p 8 of 7)

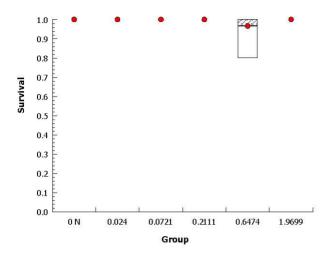
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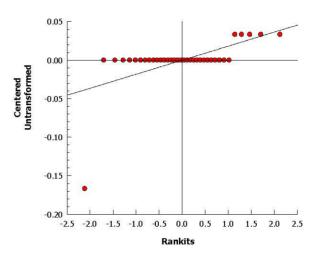
48718015 Rye | 06-1311-6585

B					
OCSPP 850.4150	Terrestrial	Plant	Tier II	(Vegetative	Vigor)
					• ,

Wildlife International

Analysis ID:	12-6089-6700	Endpoint:	Survival	CETIS Version:	CETISv1.8.7
Analyzed:	05 Feb-13 16:48	Analysis:	Nonnarametric-Control vs Ord, Treatments	Official Results:	Yes





CETIS Analytical Report

Report Date:

05 Feb-13 16:48 (p 9 of 7)

De no Analytical Report	Test Code:	48718015 Rve I 06-1311-6585

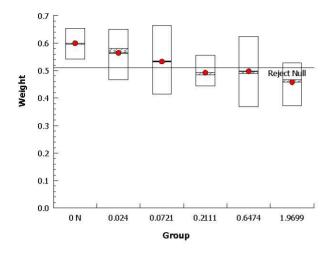
									. •••••	101 10	0.0,0	0 1011 000
OCSPP 850.4	4150 Terrestrial	Plant 1	ier II (Veget	ative Vigor)							Wildlife In	ternationa
Analysis ID:	15-0281-3694		Endpoint:	Weight				CE	TIS Version	: CETISV	1.8.7	
Analyzed:	05 Feb-13 16	:48	Analysis:	Parametric-C	ontrol vs	Treat	ments	Off	icial Results	s: Yes		
Batch ID:	21-1587-7874		Test Type:	Vegetative Vi	gor Tier II			Ana	alyst:			
Start Date:			Protocol:	OCSPP 850.4	_		getative Vig		uent:			
Ending Date	: 30 Jan-13 16:	30	Species:	Lolium pereni	ne			Bri	ne:			
Duration:	516d 16h		Source:	Meyer Seed (nore,	MD	Age	e:			
Sample ID:	06-0065-2615	1	Code:	48718015				Clic	ent: CD	MSmith		
Sample Date			Material:	Dicamba (#19	18-00-9)				ject:			
•	e: 30 Jan-13 16:	30	Source:	BASF Corpor	,				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
Sample Age:			Station:									
Data Transfo	orm	Zeta	Alt H	vp Trials	Seed			PMSD	NOEL	LOEL	TOEL	TU
Untransforme		NA	C > T		NA			15.0%	0.0721	0.2111	0.1234	
 Dunnett Mult	tiple Compariso	n Test										
Control	vs Group		Test :	Stat Critical	MSD	DF	P-Value	P-Type	Decision	η(α:5%)		
Negative Control 0.024			0.929	2.34	0.09	10	0.4506	CDF	Non-Sign	nificant Effec	t	
	0.0721		1.75	2.34	0.09	10	0.1505	CDF	Non-Sign	nificant Effec	t	
	0.2111*		2.8	2.34	0.09	10	0.0182	CDF	Significa	nt Effect		
	0.6474*		2.66	2.34	0.09	10	0.0247	CDF	Significa	nt Effect		
	1.9699*		3.7	2.34	0.09	10	0.0019	CDF	Significa	nt Effect		
ANOVA Tabl	е											
Source	Sum Sq	uares	Mean	Square	DF		F Stat	P-Value	Decision	η(α:5%)		
Between	0.081034	114	0.016	20683	5		3.67	0.0104	Significar	nt Effect		
Error	0.132518	32	0.004	417272	30		_					
Total	0.213552	23			35							
Distributiona	al Tests											
Attribute	Test			Test Sta	t Critic	al	P-Value	Decisio	n(α:1%)			
√ariances	Bartlett	Equality	of Variance	5.98	15.1		0.3077	Equal Va	ariances			
Distribution	Shapiro	-Wilk W	Normality	0.979	0.917		0.7082	Normal	Distribution			
Weight Sum	mary											
Group	Control Type	Cou	nt Mean	95% LC	L 95% l	JCL	Median	Min	Max	Std Err	CV%	% Effect
)	Negative Cont		0.599		0.639	_	0.596	0.542	0.654	0.0153	6.25%	0.0%
0.024		6	0.564		0.643		0.58	0.466	0.65	0.0307	13.4%	5.95%
		6	0.532	0.447	0.618		0.534	0.414	0.664	0.0331	15.3%	11.2%
0.0721												
0.0721		6	0.492	0.448	0.536		0.484	0.444	0.556	0.0172	8.55%	17.9%
0.0721 0.2111 0.6474 1.9699				0.448 0.401				0.444 0.368 0.372	0.556 0.624 0.528	0.0172 0.0376 0.0208	8.55% 18.5% 11.2%	17.9% 17.0% 23.7%

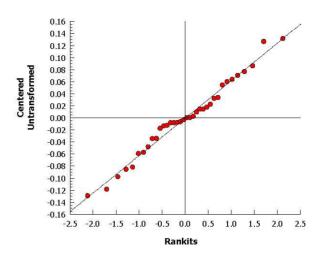
05 Feb-13 16:48 (p 10 of 7) 48718015 Rye | 06-1311-6585

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Wildlife International

Analysis ID:15-0281-3694Endpoint:WeightCETIS Version:CETIS V1.8.7Analyzed:05 Feb-13 16:48Analysis:Parametric-Control vs TreatmentsOfficial Results:Yes





CETIS Analytical Report

Report Date:

05 Feb-13 16:48 (p 11 of 7)

	Test Code:	48718015 Rye 06-1311-6585
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OCSPP 850.41	150 Terrestrial Plant Tie	er II (Vegeta	ative Vigor)		Wildlife International
Analysis ID: Analyzed:		Endpoint: Analysis:	Weight Parametric-Control vs Ord.Treatments	CETIS Version: Official Results:	CETISv1.8.7 Yes
Batch ID: Start Date: Ending Date: Duration:	02 Sep-11 30 Jan-13 16:30	• • •	Vegetative Vigor Tier II OCSPP 850.4150 Plant Vegetative Vigor Lolium perenne Meyer Seed Co., Baltimore, MD	Analyst: Diluent: Brine: Age:	
Sample ID: Sample Date: Receive Date:	02 Sep-11	Code: Material: Source:	48718015 Dicamba (#1918-00-9) BASF Corporation	Client: CDM Project:	1Smith

Sample Age: NA Station:

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	11.7%	0.0721	0.2111	0.1234	

Williams Multiple Comparison Test

Control vs	Group	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control	0.024	0.929	1.7	0.065	10	>0.05	CDF	Non-Significant Effect
	0.0721	1.75	1.78	0.068	10	>0.05	CDF	Non-Significant Effect
	0.2111*	2.8	1.8	0.069	10	<0.05	CDF	Significant Effect
	0.6474*	2.73	1.81	0.07	10	<0.05	CDF	Significant Effect
	1.9699*	3.7	1.82	0.07	10	<0.05	CDF	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.08103414	0.01620683	5	3.67	0.0104	Significant Effect
Error	0.1325182	0.004417272	30			
Total	0.2135523		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	5.98	15.1	0.3077	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.979	0.917	0.7082	Normal Distribution

Weight Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	% Effect
0	Negative Control	6	0.599	0.56	0.639	0.596	0.542	0.654	0.0153	6.25%	0.0%
0.024		6	0.564	0.485	0.643	0.58	0.466	0.65	0.0307	13.4%	5.95%
0.0721		6	0.532	0.447	0.618	0.534	0.414	0.664	0.0331	15.3%	11.2%
0.2111		6	0.492	0.448	0.536	0.484	0.444	0.556	0.0172	8.55%	17.9%
0.6474		6	0.497	0.401	0.594	0.489	0.368	0.624	0.0376	18.5%	17.0%
1.9699		6	0.457	0.404	0.511	0.466	0.372	0.528	0.0208	11.2%	23.7%

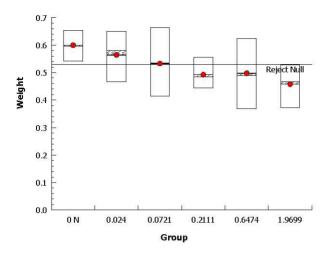
000-503-186-1 CETIS[™] v1.8.7.4 Analyst:_____ QA:_____

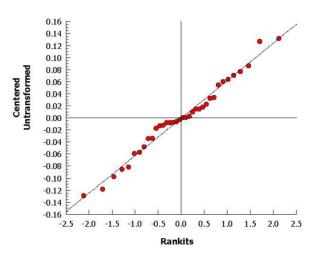
05 Feb-13 16:48 (p 12 of 7) 48718015 Rye | 06-1311-6585

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Wildlife International

Analysis ID:08-6137-3440Endpoint:WeightCETIS Version:CETIS V1.8.7Analyzed:05 Feb-13 16:48Analysis:Parametric-Control vs Ord.TreatmentsOfficial Results:Yes





05 Feb-13 16:49 (p 1 of 4) 48718015 Rye | 06-1311-6585

							Test	Code:	48718015 R	ye 06-1311-6585
OCSPP 85	0.4150 Terrestrial I	Plant Tier II	(Vegetativ	/e Vigor)					Wildl	ife International
Analysis IC Analyzed:): 18-1859-7945 05 Feb-13 16:4		•	eight onlinear Regr	ession			S Version: ial Results:	CETISv1.8.7 Yes	
Batch ID:	21-1587-7874			egetative Vigo			Anal		103	
Start Date:			• •	CSPP 850.41		ogototivo Vig		=		
						egetative vig				
_	te: 30 Jan-13 16:3	•		olium perenne			Brine			
Duration:	516d 16h	Sou	ırce: M	eyer Seed Co	o., Baltimor	e, MD	Age:			
Sample ID:		Cod		3718015			Clier		1Smith	
-	te: 02 Sep-11			icamba (#191			Proje	ect:		
	ate: 30 Jan-13 16:3			ASF Corporat	ion					
Sample Ag	e: NA	Sta	tion:							
Non-Linear	r Regression Optic	ns								
Model Fun						sform Y Tra				PTBS Function
3P Cumulat	tive Log-Normal EV	[Y=A*(1- Φ	(log(X/D)/C	;))] 	None	None	P	oisson [W=1	/Y]	Off [Y*=Y]
Regression	n Summary									
	og LL AICc	BIC	Adj R2	Optimize	F Stat	Critical	P-Value	Decision(,	
51 13	350 -2700	-2690	0.1263	Yes	0.57	2.92	0.6389	Non-Signif	icant Lack of Fit	
Point Estin	nates									
Level	95% LCL	95% UCL	ı							
IC5 0.9	908 0.201	2.22								
IC10 3.5	57 0.167	14.5								
IC25 35	5.1 N/A	2270								
IC50 44	14 N/A	N/A								
Regression	n Parameters									
Parameter	Estimate	Std Error	95% LC	L 95% UCL	t Stat	P-Value	Decision(α:5%)		
Α	19.7	0.413	18.9	20.5	47.7	<0.0001	Significan	t Parameter		
С	3.77	3.13	-2.36	9.9	1.2	0.2372	Non-Signi	ficant Param	neter	
D	444	1990	-3460	4350	0.223	0.8247	Non-Signi	ficant Param	neter	
ANOVA Tal	ble									
Source	Sum Squ	ares Mea	an Square	DF	F Stat	P-Value	Decision(α:5%)		
Model	0.506460	0.50	06460	1	7.06	0.0121	Significan	t		
Lack of Fit	0.127713	0.04	42571	3	0.57	0.6389	Non-Signi	ficant		
Pure Error	2.239516	0.07	74651	30						
Residual	2.36723	0.07	71734	33						
Residual A	nalysis									
Attribute	Method			Test Stat	Critical	P-Value	Decision(α:5%)		
Goodness-	of-Fit Pearson (Chi-Sq GOF		2.37	47.4	1.0000	Non-Signi	ficant Hetero	genity	
	Likelihood	l Ratio GOF	:	2.39	47.4	1.0000	Non-Signi	ficant Hetero	genity	
Variances	Bartlett E	quality of Va	riance	4.45	11.1	0.4865	Equal Var	iances		
	Mod Leve	ne Equality			2.53	0.5594	Equal Var			
			114	0.968	0.94	0.3753	Normal Di	stribution		
Distribution	•		•							
Distribution	•	Vilk W Norm -Darling A2	•	0.489	2.49	0.2261	Normal Di	stribution		
	An derson-		•			0.2261 alculated Var		stribution		
	An derson-		•					stribution CV%	%Effect	
Height Sun Group	Anderson- nmary	-Darling A2	Normality	0.489	Ca	alculated Var	iate		% Effect 0.0%	
Height Sun Group	Anderson nmary Control Type	-Darling A2 Count	Normality Mean	0.489 Min	Ca Max	alculated Var Std Err	iate Std Dev	CV%		
Height Sun Group 0 0.024	Anderson nmary Control Type	-Darling A2 Count 6	Normality Mean 19.7	0.489 Min 17.4	Ca Max 21	Std Err 0.546	Std Dev	CV% 6.79%	0.0%	
Height Sun	Anderson nmary Control Type	Count 6 6	Mean 19.7 19.7	0.489 Min 17.4 17	Ca Max 21 21.8	Std Err 0.546 0.634	Std Dev 1.34 1.55	CV% 6.79% 7.87%	0.0% -0.17%	
Height Sun Group 0 0.024 0.0721	Anderson nmary Control Type	Count 6 6 6	Mean 19.7 19.7 19.5	0.489 Min 17.4 17 18.4	21 21.8 20.4	Std Err 0.546 0.634 0.296	Std Dev 1.34 1.55 0.724	CV% 6.79% 7.87% 3.71%	0.0% -0.17% 1.02%	

05 Feb-13 16:49 (p 2 of 4)

Test Code: 48718015 Rye | 06-1311-6585

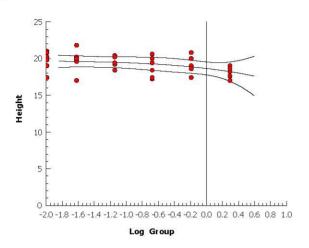
OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

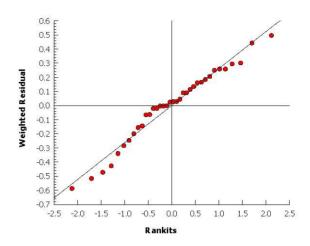
Wildlife International

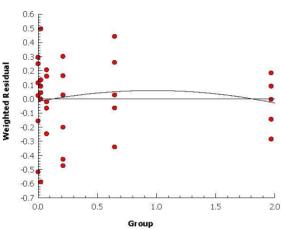
Analysis ID:18-1859-7945Endpoint:HeightCETIS Version:CETIS V1.8.7Analyzed:05 Feb-13 16:48Analysis:Nonlinear RegressionOfficial Results:Yes

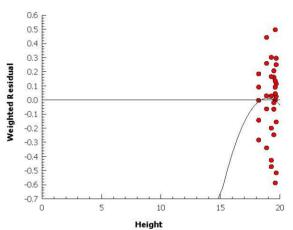
Graphics

3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]









CETIS	Analyt	ical Repo	ort					-	ort Date: Code:		3 16:49 (p 3 of 4) ye 06-1311-6585
OCSPP	850.4150	Terrestrial F	Plant Tie	er II (Vegeta	ative Vigor)					Wildl	ife International
Analysis Analyze		2-5004-5154 5 Feb-13 16:4		Endpoint: Analysis:	Weight Nonlinear Re	gression			IS Version: cial Results:	CETISv1.8.7 Yes	
Batch II Start Da Ending Duration	ate: 02 Date: 30	-1587-7874 ? Sep-11) Jan-13 16:3 6d 16h	0 -	Test Type: Protocol: Species: Source:	Vegetative Vi OCSPP 850. Lolium peren Meyer Seed 0	4150 Plant V ne		Anal gor Dilu Brin Age:	ent: e:		
-	Date: 02 Date: 30) Jan-13 16:3	0 -	Code: Material: Source: Station:	48718015 Dicamba (#19 BASF Corpor			Cliei Proj		1Smith	
Non-Lin	near Regro	ession Optio	ns								
	unction	g-Normal EV	[Y=A*(1	I- Ф(log(X/D)/C))]	X Tran None	sform Y Tr None		Veighting Fu		PTBS Function Off [Y*=Y]
Regress	sion Sum	mary									
Iters	Log LL	AICc	BIC	Adj F	2 Optimiz		Critical	P-Value	Decision(•	
7	-31	68.7	72.7	0.308	8 Yes	0.402	2.92	0.7526	Non-Signif	icant Lack of Fit	
Point Es	stimates										
Level		95% LCL	95% L	JCL							
IC5	0.00432	N/A	0.0696	6							
IC10 IC25	0.0462	0.00338	0.254 10.5								
IC25	2.42 197	0.428 1.06	36800)							
Regress	sion Para	meters									_
Paramet		Estimate	Std E	rror 95% l	.CL 95% UC	L t Stat	P-Value	Decision	(α:5%)		
Α		0.601	0.0282			21.3	<0.0001	-	t Parameter		
С		6.52	2.83	0.975		2.3	0.0276	-	t Parameter	-4	
D		197	459	-702	1100	0.43	0.6701	Non-Sign	ficant Param	ieter	
ANOVA	Table										
Source		Sum Squ		Mean Squa		F Stat	P-Value	Decision	,		
Model Lack of I	⊏iŧ	0.142055 0.010270		0.142055 0.003423	1 3	17.6 0.402	0.0002 0.7526	Significan Non-Signi			
Pure Err		0.255499		0.003423	30	0.402	0.7 320	Non-Oigh	incam		
Residual		0.265769		0.008054	33						
Residua	al Analysi:	s									
Attribute	е	Method			Test Sta	at Critical	P-Value	Decision	(α:5%)		
Goodnes	ss-of-Fit	Pearson (Chi-Sq G	OF	0.266	47.4	1.0000	Non-Sign	ficant Hetero	genity	
		Likelihood			0.265	47.4	1.0000	Non-Sign	ficant Hetero	genity	
Variance	es	Bartlett Ed			6.37	11.1	0.2716	Equal Var			
Distribut	ion	Shapiro-W		ality of Varia	nce 1.01 0.981	2.53 0.94	0.4295 0.7630	Equal Val	iances istribution		
Distribut		•		A2 Normali		2.49	0.5911		istribution		
Weight	Summary	,				C	alculated Va	nriate			
Group	-	trol Type	Count	t Mean	Min	Max	Std Err	Std Dev	CV%	% Effect	
0		ative Control	6	0.599	0.542	0.654	0.0153	0.0375	6.25%	0.0%	
0.024			6	0.564	0.466	0.65	0.0307	0.0753	13.4%	5.95%	
0.0721			6	0.532		0.664	0.0331	0.0812	15.3%	11.2%	
0.2111			6	0.492		0.556	0.0172	0.042	8.55%	17.9%	
0.6474			6	0.497	0.368	0.624	0.0376	0.092	18.5%	17.0%	
1.9699			6	0.457	0.372	0.528	0.0208	0.051	11.2%	23.7%	

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Wildlife International

Test Code: 48718015 Rye | 06-1311-6585

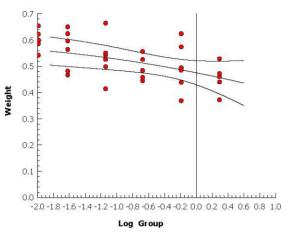
OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

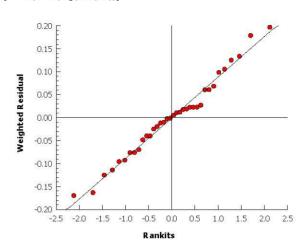
12-5004-5154Endpoint:WeightCETIS Version:CETIS V1.8.705 Feb-13 16:47Analysis:Nonlinear RegressionOfficial Results:Yes

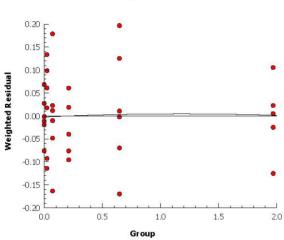
Analyzed: Graphics

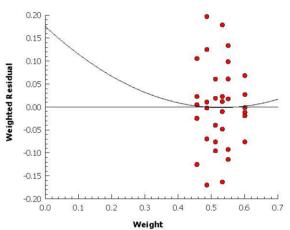
Analysis ID:

3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]









CETIS Analytical Report Report Date: 05 Feb-13 16:51 (p 1 of 7) Test Code: 48718015 Soybea | 10-7295-8436

								162	i Coue.	407 100 13	Soybea 1	0-7255-04
OCSPP 850.4	150 Terrestrial P	lant Tie	er II (Vegeta	ative Vigor)							Wildlife In	iternation
Analysis ID:	21-2408-1449		Endpoint:	Height				CE	ΓIS Version	ı: CETISv1	.8.7	
Analyzed:	05 Feb-13 16:5	0 .	Analysis:	Parametric-Co	ntrol vs	Treat	ments	Offi	cial Result	s: Yes		
Batch ID:	19-9144-5306		Test Type:	Vegetati∨e Vig	or Tier II			Δna	lyst:			
Start Date:	10 Aug-11		Protocol:	OCSPP 850.4			netative Vic		ient:			
	31 Jan-13 13:44				I JU FIAI	ıı veş	getative vig	ıcı Brir				
Ending Date:			Species:	Glycine max	dation C		MO					
Duration:	540d 14h		Source:	Missouri Found	Jalion S	eeus	, IVIO	Age	' •			
Sample ID:	14-0575-3397		Code:	48718015				Clie	nt: CE	OMSmith		
Sample Date:	-		Material:	Dicamba (#191	18-00-9)			Pro	ject:			
Receive Date:	: 31 Jan-13 13:44	4	Source:	BASF Corpora	tion							
Sample Age:	NA		Station:									
Data Transfor	·m	Zeta	Alt H	yp Trials	Seed			PMSD	NOEL	LOEL	TOEL	TU
Untransformed	t	NA	C > T	NA	NA			5.48%	0.0003	0.0009	0.00051	96
Dunnett Multi	ple Comparison	Test										
Control	vs Group		Test	Stat Critical	MSD	DF	P-Value	P-Type	Decision	n(α:5%)		
Negative Conti	rol 0.0001		1.26	2.38	2.52	10	0.3355	CDF	Non-Sigr	nificant Effec	t	
	0.0003		2.08	2.38	2.52	10	0.0917	CDF	Non-Sigr	nificant Effec	t	
	0.0009*		12.1	2.38	2.52	10	<0.0001	CDF	Significa	nt Effect		
	0.0026*		17.4	2.38	2.52	10	<0.0001	CDF	Significa	nt Effect		
	0.0082*		23.9	2.38	2.52	10	<0.0001	CDF	Significa	nt Effect		
	0.0245*		29.4	2.38	2.52	10	<0.0001	CDF	Significa	nt Effect		
ANOVA Table	1											
Source	Sum Squa	ares	Mean	Square	DF		F Stat	P-Value	Decision	n(α:5%)		
Between	5557.586		926.2	645	6		276	<0.0001	Significa	nt Effect		
Error	117.2667		3.350	476	35							
Total	5674.853				41		_					
Distributional	Tests											
Attribute	Test			Test Stat	Critic	al	P-Value	Decision	ι(α:1%)			
Variances	Bartlett E	quality o	of Variance	4.86	16.8		0.5614	Equal Va	riances			
Distribution	Shapiro-V	Vilk W 1	Vormality	0.962	0.927		0.1676	Normal [Distribution			
Height Summ	ary											
Group	Control Type	Count	t Mean	95% LCL	95% เ	JCL	Median	Min	Max	Std Err	CV%	% Effect
ס	Negative Contro	l 6	45.9	43.9	47.9		45.6	43.6	49.4	0.781	4.16%	0.0%
0.0001		6	44.6	42.4	46.8		44.2	41.8	47	0.839	4.61%	2.9%
0.0003		6	43.7	41.2	46.2		44.1	40.4	46.2	0.974	5.45%	4.79%
		6	33.1	30.9	35.4		32.8	31.2	37	0.873	6.45%	27.9%
0.0009												
		6	27.6	26.5	28.6		27.5	26.6	29	0.421	3.74%	40.0%
0.0009 0.0026 0.0082		6 6	27.6 20.7	26.5 18.9	28.6 22.5		27.5 20	26.6 19.2	29 23.6	0.421 0.696	3.74% 8.25%	40.0% 55.0%

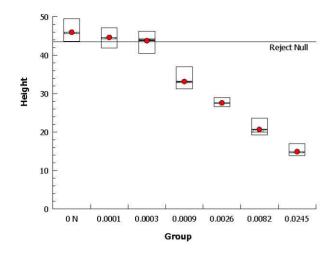
05 Feb-13 16:51 (p 2 of 7)

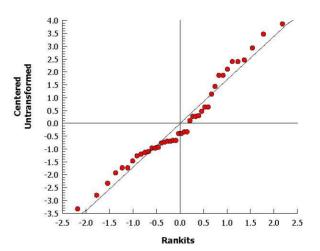
Test Code: 48718015 Soybea | 10-7295-8436

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Wildlife International

Analysis ID:	21-2408-1449	Endpoint:	Height	CETIS Version:	CETISv1.8.7
Analyzod:	05 Eab 12 16:50	Analysis	Deremetria Central ve Treetmente	Official Popultor	Voc





 Port
 Report Date:
 05 Feb-13 16:51 (p 3 of 7)

 Test Code:
 48718015 Soybea | 10-7295-8436

									Te	st Code:	48718015	Soybea 1	0-7295-843
OCSPP 850.4	150 Terrestrial Pl	lant Ti	er II (Veget	ative \	/igor)							Wildlife In	ternationa
Analysis ID: Analyzed:	19-7088-0458 05 Feb-13 16:50		Endpoint: Analysis:	_		itrol vs	Ord. T	Freatments		TIS Version		1.8.7	
Batch ID:	19-9144-5306		Test Type:	Vege	tative Viac	r Tier II			Ar	alyst:			
Start Date:	10 Aug-11		Protocol:	_	•			getative Vig		uent:			
Ending Date:	ū		Species:		ne max			,		ine:			
Duration:	540d 14h		Source:	-	ouri Found	ation Se	eeds	MO	Ag				
Sample ID:	14-0575-3397		Code:	4871							DMSmith		
Sample Date:	-		Material:		mba (#191	,			Pr	oject:			
	: 31 Jan-13 13:44		Source:	BASE	- Corporat	ion							
Sample Age:	NA		Station:										
Data Transfor	m	Zeta	Alt H		Trials	Seed			PMSD	NOEL	LOEL	TOEL	TU
Untransformed	d	NA	C > T	-	NA	NA			4.18%	0.0001	0.0003	0.000173	32
Williams Mult	iple Comparison	Test											
Control	vs Group		Test	Stat	Critical	MSD	DF	P-Value	P-Type	Decisio	n(α:5%)		
Negative Conti	rol 0.0001		1.26		1.69	1.79	10	>0.05	CDF	Non-Sig	nificant Effec	t	
	0.0003*		2.08		1.77	1.87	10	<0.05	CDF	Significa	nt Effect		
	0.0009*		12.1		1.79	1.89		<0.05	CDF	Significa	nt Effect		
	0.0026*		17.4		1.8	1.91	10	<0.05	CDF	Significa	nt Effect		
	0.0082*		23.9		1.81	1.91	10	<0.05	CDF	Significa	nt Effect		
	0.0245*		29.4		1.82	1.92	10	<0.05	CDF	Significa	nt Effect		
ANOVA Table	ı												
Source	Sum Squa	res	Mean	Squa	re	DF		F Stat	P-Value	Decisio	n(α:5%)		
Between	5557.586		926.2	645		6		276	<0.000	Significa	nt Effect		
Error	117.2667		3.350	476		35		_					
Total	5674.853					41		_					
Distributional	Tests												
Attribute	Test				Test Stat	Critic	al	P-Value	Decisio	n(α:1%)			
Variances	Bartlett Eq	quality o	of Variance		4.86	16.8		0.5614	Equal ∖	'ariances			
Distribution	Shapiro-W	/ilk W I	Normality		0.962	0.927		0.1676	Normal	Distribution			
Height Summ	ary												
_	Control Type	Coun	t Mean	ì	95% LCL	95% L	JCL	Median	Min	Мах	Std Err	CV%	% Effect
Group					43.9	47.9		45.6	43.6	49.4	0.781	4.16%	0.0%
•	Negative Control	6	45.9					44.0	44.0	47	0.000	4.61%	2.9%
0	Negative Control	6 6	44.6		42.4	46.8		44.2	41.8	47	0.839		
0.0001	Negative Control		44.6 43.7		42.4 41.2	46.8 46.2		44.1	40.4	46.2	0.839 0.974	5.45%	4.79%
0.0001 0.0003	Negative Control	6	44.6 43.7 33.1					44.1 32.8	40.4 31.2	46.2 37			
0 0.0001 0.0003 0.0009	Negative Control	6 6	44.6 43.7		41.2	46.2		44.1	40.4	46.2	0.974	5.45%	4.79%
Group 0 0.0001 0.0003 0.0009 0.0026 0.0082	Negative Control	6 6 6	44.6 43.7 33.1		41.2 30.9	46.2 35.4		44.1 32.8	40.4 31.2	46.2 37	0.974 0.873	5.45% 6.45%	4.79% 27.9%

05 Feb-13 16:51 (p 4 of 7)

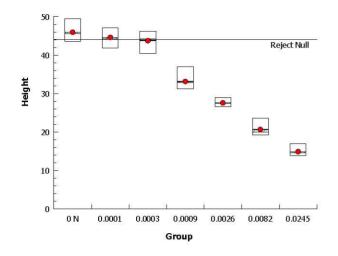
Test Code:

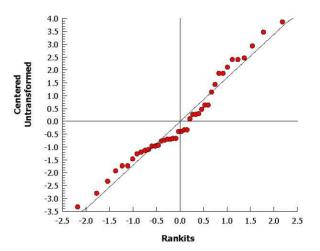
48718015 Soybea | 10-7295-8436

OCSPP 850.4150 Terre	estrial Plant	Tier II (V	egetative	Vigor)
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Wildlife International

Analysis ID:	19-7088-0458	Endpoint:	Height	CETIS Version:	CETISv1.8.7
Analyzad:	05 Eab 12 16:50	Analysis	Decemetric Central ve Ord Treetments	Official Pacultos	Voc





05 Feb-13 16:51 (p 5 of 7)

Test Code: 4

48718015 Soybea | 10-7295-8436

OCSPP 850.4150) Terrestrial Plan	t Tier II (Veg	getative Vigor
OCOFF 030.4130	i terrestriai Fran	r mer m (A e ?	Jeranive vigor

Wildlife International

Analysis ID: Analyzed:	08-0392-2524 05 Feb-13 16:50	Endpoint: Analysis:	Survival Nonparametric-Two Sample	CETIS Version Official Result	
Batch ID:	19-9144-5306	Test Type:	Vegetative Vigor Tier II	Analyst:	
Start Date:	10 Aug-11	Protocol:	OCSPP 850.4150 Plant Vegetative Vigor	Diluent:	
Ending Date:	31 Jan-13 13:44	Species:	Glycine max	Brine:	
Duration:	540d 14h	Source:	Missouri Foundation Seeds, MO	Age:	
Sample ID:	14-0575-3397	Code:	48718015	Client: CE	DMSmith
Sample Date:	10 Aug-11	Material:	Dicamba (#1918-00-9)	Project:	

Receive Date: 31 Jan-13 13:44 Source: BASF Corporation

Codice.

Sample Age: NA Station:

Data Transform	Zeta	Alt Hyp	Trials	Seed	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	0.0245	>0.0245	NA	

Mann-Whitney U Two-Sample Test

Control vs	Group	Test Stat	Critical	Ties	DF P-Value	P-Type	Decision(α:5%)
Negative Control	0.0001	18	NA	1	10 1.0000	Exact	Non-Significant Effect
	0.0003	18	NA	1	10 1.0000	Exact	Non-Significant Effect
	0.0009	18	NA	1	10 1.0000	Exact	Non-Significant Effect
	0.0026	18	NA	1	10 1.0000	Exact	Non-Significant Effect
	0.0082	18	NA	1	10 1.0000	Exact	Non-Significant Effect
	0.0245	18	NA	1	10 1.0000	Exact	Non-Significant Effect

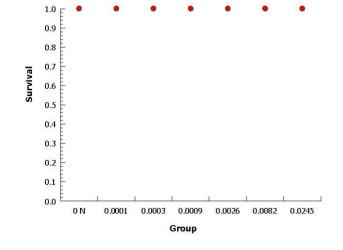
ANOVA Table

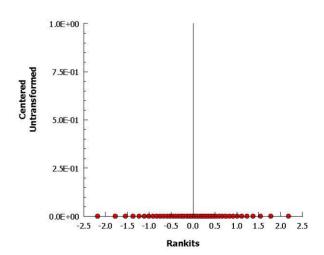
Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0	0	6	65500	<0.0001	Significant Effect
Error	0	0	35			
Total	0		41			

Survival Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	% Effect
0	Negative Control	6	1	1	1	1	1	1	0	0.0%	0.0%
0.0001		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0003		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0009		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0026		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0082		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0245		6	1	1	1	1	1	1	0	0.0%	0.0%

Graphics





000-503-186-1 CETIS™ v1.8.7.4 Analyst:_____ QA:_____

05 Feb-13 16:51 (p 6 of 7)

Test Code:

48718015 Soybea | 10-7295-8436

OCSPP 850	1.4150 Terresti	rial Plant Ti	ier II (Vege	tative Vigo	r)
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Wildlife International

Analysis ID: Analyzed:	04-3972-7164 05 Feb-13 16:50	Endpoint: Analysis:	Survival Nonparametric-Control vs Ord. Treatments	CETIS Vers	
Batch ID:	19-9144-5306	Test Type:	Vegetative Vigor Tier II	Analyst:	
Start Date:	10 Aug-11	Protocol:	OCSPP 850.4150 Plant Vegetative Vigor	e Vigor Diluent:	
Ending Date:	31 Jan-13 13:44	Species:	Glycine max	Brine:	
Duration:	540d 14h	Source:	Missouri Foundation Seeds, MO	Age:	
Sample ID:	14-0575-3397	Code:	48718015	Client:	CDMSmith
Sample Date:	10 Aug-11	Material:	Dicamba (#1918-00-9)	Project:	
Receive Date:	31 Jan-13 13:44	Source:	BASF Corporation		

Sample Age: NA Station:

Data Transform	Zeta	Alt Hyp	Trials	Seed	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	0.0245	>0.0245	NA	

Jonckheere-Terpstra Step-Down Test

Control vs	Group	Test Stat	Critical	Ties	DF	P-Value	P-Type	Decision(α:5%)
Negative Control	0.0001	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect
	0.0003	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect
	0.0009	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect
	0.0026	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect
	0.0082	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect
	0.0245	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect

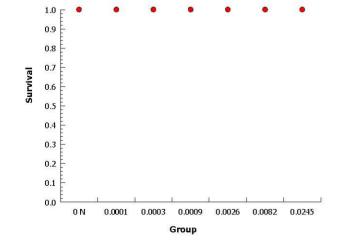
ANOVA Table

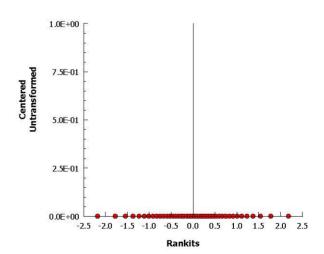
Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0	0	6	65500	<0.0001	Significant Effect
Error	0	0	35			
Total	0		41			

Survival Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	% Effect
0	Negative Control	6	1	1	1	1	1	1	0	0.0%	0.0%
0.0001		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0003		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0009		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0026		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0082		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0245		6	1	1	1	1	1	1	0	0.0%	0.0%

Graphics





CETIS™ v1.8.7.4 000-503-186-1 Analyst:_____ QA:___

05 Feb-13 16:51 (p 7 of 7)

Test Code: 48718015 Soybea | 10-7295-8436

							1031 0	ouo.	101 100 10	00,000 1	0 1200 0 10
OCSPP 850.4150 T	errestrial Plant	Tier II (Veget	ative Vigor)							Wildlife In	ternationa
Analysis ID: 07-0)868-8781	Endpoint:	Weight				CETIS	Version:	CETISV	1.8.7	
Analyzed: 05 l	Feb-13 16:50	Analysis:	Parametric-Cor	ntrol vs Tr	eatments		Officia	al Results	: Yes		
Batch ID: 19-9	144-5306	Test Tyne:	Vegetative Vigo	or Tier II			Analys	et.			
	Aug-11	Protocol:	OCSPP 850.41		/egetativ	e Vigor	Diluen				
	an-13 13:44	Species:	Glycine max	oo i idiit	ogotativ	o tigoi	Brine:				
-	d 14h	Source:	Missouri Found	lation See	ds M∩		Age:				
				lation dec	u3, IVIO						
•	575-3397	Code:	48718015				Client:		MSmith		
Sample Date: 10 A	-	Material:	Dicamba (#191	,			Projec	:t:			
Receive Date: 31 J	an-13 13:44	Source:	BASF Corporat	ion							
Sample Age: NA		Station:									
Data Transform	Zet	a Alt H	lyp Trials	Seed		P₩	ISD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA NA	NA		7.7	'5%	<0.0001	0.0001	NA	
Dunnett Multiple C	omparison Test	Ì									
Control vs	Group	Test	Stat Critical	MSD	OF P-Val	ue P-	Туре	Decision	(α:5%)		
Negative Control	0.0001*	3.83	2.38	0.404	0.001	3 CE	F	Significar	nt Effect		
	0.0003*	5.93	2.38	0.404	0.00	001 CE)F	Significar	nt Effect		
	0.0009*	6.13	2.38	0.404	0.00	001 CE)F	Significar	nt Effect		
	0.0026*	10.6	2.38	0.404	0.00	001 CE)F	Significar	nt Effect		
	0.0082*	13.2	2.38	0.404	0.00	001 CE)F	Significar	nt Effect		
	0.0245*	19.3	2.38	0.404	0.00	001 CE)F	Significar	nt Effect		
ANOVA Table											
Source	Sum Squares	Mean	Square	DF	F Sta	t P-\	√alue	Decision	(α:5%)		
Between	42.96946	7.161	576	6	83.1	<0.	.0001	Significar	nt Effect		
Error	3.0168	0.086	1943	35							
Total	45.98626			41							
Distributional Test	s										
Attribute	Test		Test Stat	Critical	P-Va	ue De	cision(α	:1%)			
√ariances	Bartlett Equalit	y of Variance	8.79	16.8	0.185	6 Eq	ual Varia	nces			
Distribution	Shapiro-Wilk V	V Normality	0.989	0.927	0.943	5 No	rmal Dist	ribution:			
Weight Summary											
Group Cont	rol Type Cou	unt Mean	95% LCL	95% UC	L Medi	an Mi	n	Мах	Std Err	CV%	% Effect
) Nega	tive Control 6	5.21	4.9	5.52	5.15	4.8	7	5.62	0.122	5.72%	0.0%
0.0001	6	4.56	4.03	5.09	4.57	3.8	4	5.25	0.208	11.1%	12.5%
0.0003	6	4.21	3.91	4.5	4.2	3.8	2	4.55	0.116	6.73%	19.3%
0.0009	6	4.17	3.96	4.38	4.2	3.8	3	4.4	0.0806	4.73%	19.9%
0.0026	6	3.42	3.15	3.7	3.52	3.0	15	3.65	0.107	7.63%	34.3%
	6	2.97	2.75	3.2	2.94	2.7	6	3.34	0.0859	7.08%	42.9%
0.0082	Ü	2.07	2.70	5.2	2.54	2.7	0	3.34	0.0659	7.00%	42.370

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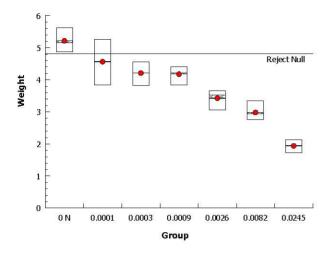
Test Code:

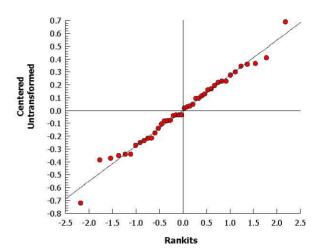
48718015 Soybea | 10-7295-8436

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Wildlife International

Analysis ID:07-0868-8781Endpoint:WeightCETIS Version:CETIS V1.8.7Analyzed:05 Feb-13 16:50Analysis:Parametric-Control vs TreatmentsOfficial Results:Yes





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		•
Test Code:	48718015 Sovbea I 10-7295-843	36

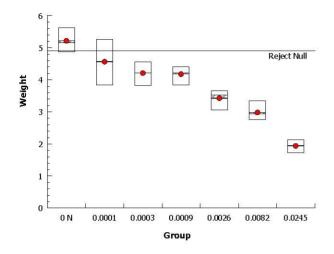
								Те	st Code:	48718015	Soybea 1	0-7295-843
OCSPP 850.4	150 Terrestrial Pl	ant Tie	r II (Vegeta	ative Vigor)							Wildlife Ir	iternational
Analysis ID: Analyzed:	16-0848-9647 05 Feb-13 16:50		ndpoint: nalysis:	Weight Parametric-Co	ontrol vs (Ord.	Treatments		ETIS Version ficial Resul		1.8.7	
Batch ID:	19-9144-5306	Т	est Type:	Vegetative Vi	or Tier II			Ar	nalyst:			
Start Date:	10 Aug-11		rotocol:	OCSPP 850.4			aetative Via		luent:			
Ending Date:	ŭ		pecies:	Glycine max			9		ine:			
Duration:	540d 14h		ource:	Missouri Four	dation Se	eds	MO	_	iiio. je:			
D aration:							,	, 4	,··			
Sample ID:	14-0575-3397	С	ode:	48718015						DMSmith		
Sample Date:	•		laterial:	Dicamba (#19	18-00-9)			Pr	oject:			
Receive Date:	: 31 Jan-13 13:44	S	ource:	BASF Corpora	ation							
Sample Age:	NA	S	tation:									
Data Transfor		Zeta	Alt H	yp Trials	Seed			PMSD	NOEL	LOEL	TOEL	TU
Untransformed	d	NA	C > T	NA	NA			5.91%	<0.0001	0.0001	NA	
Williams Mult	iple Comparison	Test										
Control	vs Group		Test \$	Stat Critical	MSD	DF	P-Value	P-Type	Decisio	ın(α:5%)		
Negative Cont	rol 0.0001*		3.83	1.69	0.286	10	<0.05	CDF	Significa	ant Effect		
	0.0003*		5.93	1.77	0.3	10	<0.05	CDF	Significa	ant Effect		
	0.0009*		6.13	1.79	0.304	10	<0.05	CDF	Significa	ant Effect		
	0.0026*		10.6	1.8	0.306	10	<0.05	CDF		ant Effect		
	0.0082*		13.2	1.81	0.307	10	<0.05	CDF	Significa	ant Effect		
	0.0245*		19.3	1.82	0.308	10	<0.05	CDF	Significa	ant Effect		
ANOVA Table	1											
Source	Sum Squai	res	Mean	Square	DF		F Stat	P-Valu	e Decisio	n(α:5%)		
Between	42.96946		7.161	576	6		83.1	<0.000	1 Significa	ant Effect		
Error	3.0168		0.086	1943	35		_					
Total	45.98626				41							
Distributional	Tests											
Attribute	Test			Test S ta	t Critica	al	P-Value	Decisio	on(α:1%)			
Variances	Bartlett Eq	uality of	f Variance	8.79	16.8		0.1856	Equal \	/ariances	_		
Distribution	Shapiro-W	ilk W N	ormality	0.989	0.927		0.9435	Normal	Distribution			
Weight Sumn	nary											
Group	Control Type	Count	Mean	95% LCI	. 95% L	ICL	Median	Min	Max	Std Err	CV%	% Effect
0	Negative Control	6	5.21	4.9	5.52		5.15	4.87	5.62	0.122	5.72%	0.0%
0.0001		6	4.56	4.03	5.09		4.57	3.84	5.25	0.208	11.1%	12.5%
		6	4.21	3.91	4.5		4.2	3.82	4.55	0.116	6.73%	19.3%
0.0003				2.00	4.38		4.2	3.83	4.4	0.0806	4.73%	19.9%
		6	4.17	3.96	4.30			5.05		0.0000	4.7370	13.370
0.0009		6 6	4.17 3.42	3.96	3.7		3.52	3.05	3.65	0.107	7.63%	34.3%
0.0003 0.0009 0.0026 0.0082 0.0245												

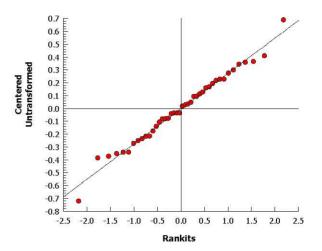
05 Feb-13 16:51 (p 10 of 7)

Test Code: 48718015 Soybea | 10-7295-8436

Wildlife International

Analysis ID:16-0848-9647Endpoint:WeightCETIS Version:CETIS V1.8.7Analyzed:05 Feb-13 16:50Analysis:Parametric-Control vs Ord.TreatmentsOfficial Results:Yes





Report Date: **CETIS Analytical Report** 05 Feb-13 16:51 (p 1 of 4) **Test Code:** 48718015 Soybea | 10-7295-8436

								Test	Code:	48718015 Soyb	ea 10-7295-8436
OCSPP 85	0.4150 T	errestrial P	lant Tier	II (Vegeta	tive Vigor)					Wild	llife International
Analysis IE Analyzed:		I390-5979 Eeb-13 16:5		dpoint: alysis:	Height Nonlinear Reg	ression			S Version:		
Batch ID:	19-9	144-5306	Te	st Type:	Vegetative Vig	or Tier II		Anal	yst:		
Start Date:	: 10 A	\ug-11		otocol:	OCSPP 850.4		egetative Vic		•		
Ending Dat		an-13 13:4		ecies:	Glycine max			Brin	e:		
Duration:		d 14h	•	urce:	Missouri Found	dation Seed	ls, MO	Age:			
Comple ID	. 110	NETE 2207		de:	48718015			Clies	t. CDI	MSmith	
Sample ID: Sample Da)575-3397 \ug-11		iue: iterial:	Dicamba (#19	18_00_9)		Clier Proje		AIOMIN	
•		an-13 13:4		urce:	BASF Corpora			110,			
Sample Ag		un 10 10.1		ation:	<i>27</i> (3) (30) por a						
-	-	-! 0-4!-									
	_	sion Optio	ns								
Model Fun		NI I EV /	D/ A+/4 -	h/I////D	\(\chi\)1		sform Y Tra		/eighting F		PTBS Functio
3P Cumulai	tive Log-	Normal EV	[Y=A^(1- C	P(log(X/D)/C))] 	None	None	• P	oisson [W=	1/Y]	Off [Y*=Y]
Regression	n Summ	ary									
Iters Lo	og LL	AICc	BIC	Adj R	2 Optimize	F Stat	Critical	P-Value	Decision	(α:5%)	
7 35	540	-7070	-7070	0.9570	3 Yes	8.32	2.64	0.0001	Significan	t Lack of Fit	
Point Estin	nates										
Level		95% LCL	95% UC	L							
	0000537	1.97E-05	0.0001								
	000149	9.75E-05	0.000214	4							
	000826	0.000664	0.00102								
IC50 0.	00552	0.00485	0.00627								
Regression	n Param	eters									
Parameter		Estimate	Std Erro	or 95% L	.CL 95% UCL	. t Stat	P-Value	Decision	α:5%)		
Α		47.4	1.07	45.3	49.5	44.3	<0.0001		t Parameter		
С		2.82	0.166	2.49	3.14	16.9	<0.0001	•	t Parameter		
D		0.00552	0.000632	2 0.0042	28 0.00676	8.73	<0.0001	Significan	t Parameter	•	
ANOVA Tal	ble										
Source		Sum Squa	ares Me	an Squa	re DF	F Stat	P-Value	Decision	ˈɑ:5%)		
Model		165.3707		5.3707	1	929	<0.0001	Significan			
Lack of Fit		3.384928		346232	4	8.32	<0.0001	Significan			
Pure Error		3.557784		01651	35			J			
Residual		6.942712	0.1	78018	39						
Residual A	\nalvsis										
Attribute	,	Method			Test Stat	Critical	P-Value	Decision	'α:5%)		
Goodness-	of-Fit	Pearson C	hi-Sq GO	 F	6.94	54.6	1.0000		ficant Heter	ogenity	
		Likelihood			6.85	54.6	1.0000	Non-Signi	ficant Heter	ogenity	
Variances		Bartlett Eq	uality of V	ariance	2.6	12.6	0.8576	Equal Var	iances		
		Mod Lever	ne Equality	of Varia	nce 0.435	2.37	0.8503	Equal Var	iances		
D:-4-:14:		Shapiro-W		•	0.952	0.947	0.0743	Normal Di			
Distribution		Anderson-	Darling A2	2 Normalit	ty 0.689	2.49	0.0722	Normal Di	stribution		
Distribution						Ca	alculated Va	riate			
	mmary										
Height Sur		ol Type	Count		Min	Max	Std Err	Std Dev	CV%	% Effect	
Height Sur Group	Contro	ol Type ve Control	Count 6	Mean 45.9	Min 43.6			Std Dev 1.91	CV% 4.16%	% Effect 0.0%	
Height Sur Group 0	Contro					Max	Std Err				
Height Sur Group 0 0.0001	Contro		6	45.9	43.6	Max 49.4	Std Err 0.781	1.91	4.16%	0.0%	
Height Sur Group 0 0.0001 0.0003	Contro		6 6	45.9 44.6	43.6 41.8	Max 49.4 47	Std Err 0.781 0.839	1.91 2.06	4.16% 4.61%	0.0% 2.9%	
Height Sur Group 0 0.0001 0.0003 0.0009 0.0026	Contro		6 6 6	45.9 44.6 43.7	43.6 41.8 40.4	Max 49.4 47 46.2	Std Err 0.781 0.839 0.974	1.91 2.06 2.39	4.16% 4.61% 5.45%	0.0% 2.9% 4.79%	
Height Sur Group 0 0.0001 0.0003 0.0009	Contro		6 6 6	45.9 44.6 43.7 33.1	43.6 41.8 40.4 31.2	Max 49.4 47 46.2 37	Std Err 0.781 0.839 0.974 0.873	1.91 2.06 2.39 2.14	4.16% 4.61% 5.45% 6.45%	0.0% 2.9% 4.79% 27.9%	

000-503-186-1 CETIS™ v1.8.7.4 Analyst:_____ QA:____

05 Feb-13 16:51 (p 2 of 4)

Test Code:

48718015 Soybea | 10-7295-8436

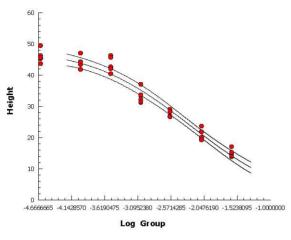
OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

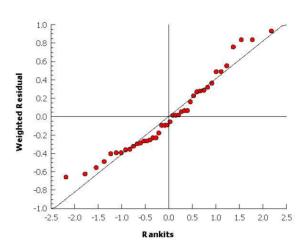
Wildlife International

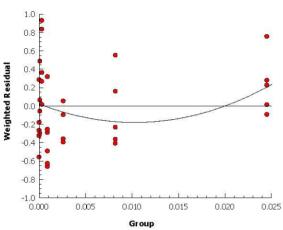
Analysis ID:19-4390-5979Endpoint:HeightCETIS Version:CETIS V1.8.7Analyzed:05 Feb-13 16:50Analysis:Nonlinear RegressionOfficial Results:Yes

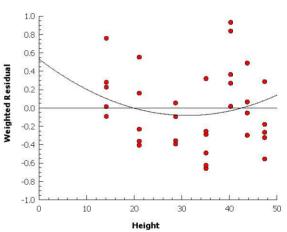
Graphics

3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]









05 Feb-13 16:51 (p 3 of 4)

Test Code: 48718015 Soybea | 10-7295-8436

	0.4150 T	errestrial P	lant Tier II	(Vegetativ	e Vigor)					Wild	ife International
Analysis IE Analyzed:		1477-9420 Feb-13 16:5		dpoint: W alysis: No	eight onlinear Regr	ession			S Version: ial Results		
Batch ID:	19-9	144-5306	Tes	t Type: Ve	egetative Vigo	or Tier II		Analy	yst:		
Start Date:		\ug-11		tocol: O	CSPP 850.41	50 Plant V	egetative Vigo	or Dilu e	nt:		
Ending Da			4 Spe		ycine max			Brine):		
Duration:	540	d 14h	Sou	urce: Mi	issouri Found	lation Seed	s, MO	Age:			
Sample ID:		575-3397	Cod		3718015			Clien		M Smith	
Sample Da		-			camba (#191	*		Proje	ect:		
Receive Da		lan-13 13:44			ASF Corporat	ion					
Sample Ag				tion:							
Non-Linea	Regres	sion Optio	ns								
Model Fun						X Trans			eighting F		PTBS Function
3P Cumulat	tive Log-	Normal EV	[Y=A*(1- Φ	(log(X/D)/C	·))]	None	None	P	oisson [W=	1/Y] 	Off [Y*=Y]
Regression	1 Summ	ary									
	g LL	AICc	BIC	Adj R2	Optimize		Critical	P-Value	Decision(,	
10 58	3.5	-110	-106	0.9078	Yes	3.72	2.64	0.0126	Significan	t Lack of Fit	
Point Estin	nates										
Level		95% LCL	95% UCL								
		1.51E-05	0.000137								
	000197	0.000109	0.000317								
	00137 0119	0.00102 0.00965	0.00181 0.0146								
			0.0140								
Regression	n Param	eters									
Parameter		Estimate	Std Error			t Stat	P-Value	Decision(
A C		5.06 3.2	0.138 0.29	4.79 2.63	5.33 3.77	36.6 11	<0.0001 <0.0001	•	: Parameter : Parameter		
D		0.0119	0.23	0.00827	0.0154	6.48	<0.0001	•	: Parameter		
ANOVA Ta	hla							9			
	DIE	Sum Sauc	oroo Mo	on Causes	DE	E Stat	D Volus	Decision/	~:E0/ \		
Source Model		Sum Squa		an Square 0903	DF 1	F Stat 406	P-Value <0.0001	Decision(Significant			
WOOGCI		11 0903				700					
Lack of Fit		11.0903 0.318038				3.72		-	•		
Lack of Fit Pure Error		11.0903 0.318038 0.748148	0.0	7951	4 35	3.72	0.0126	Significant	:		
		0.318038	0.0° 0.0°		4	3.72		-	•		
Pure Error Residual	nalysis	0.318038 0.748148	0.0° 0.0°	7951 21376	4 35	3.72		-	:		
Pure Error	nalysis	0.318038 0.748148	0.0° 0.0°	7951 21376	4 35		0.0126	Significant			
Pure Error Residual Residual A		0.318038 0.748148 1.066186	0.0° 0.0° 0.0°	7951 21376 27338	4 35 39			Significant Decision(ogenity	
Pure Error Residual Residual A Attribute		0.318038 0.748148 1.066186 Method	0.0 0.0: 0.0:	7951 21376 27338	4 35 39 Test Stat 1.07 1.08	Critical 54.6 54.6	0.0126 P-Value	Significant Decision(Non-Signit	α:5%)		
Pure Error Residual Residual A Attribute		0.318038 0.748148 1.066186 Method Pearson C Likelihood Bartlett Eq	0.0 0.0 0.0 0.0 Chi-Sq GOF Ratio GOF Juality of Va	7951 21376 27338 	4 35 39 Test Stat 1.07 1.08 5.01	Critical 54.6 54.6 12.6	P-Value 1.0000 1.0000 0.5428	Decision(Non-Signit Non-Signit Equal Vari	α:5%) ficant Hetero ficant Hetero ances		
Pure Error Residual A Attribute Goodness-o Variances	of-Fit	0.318038 0.748148 1.066186 Method Pearson C Likelihood Bartlett Eq Mod Lever	0.0° 0.00 0.00 Chi-Sq GOF Ratio GOF quality of Va ne Equality	7951 21376 27338 	4 35 39 Test Stat 1.07 1.08 5.01 e 1.25	Critical 54.6 54.6 12.6 2.37	P-Value 1.0000 1.0000 0.5428 0.3064	Decision(Non-Signit Non-Signit Equal Vari	α:5%) ficant Heter ficant Heter ances ances		
Pure Error Residual Residual A Attribute Goodness-	of-Fit	0.318038 0.748148 1.066186 Method Pearson C Likelihood Bartlett Eq Mod Lever Shapiro-W	0.0° 0.0° 0.0° Chi-Sq GOF Ratio GOF quality of Va ne Equality (ilk W Norm	7951 21376 27338 	4 35 39 Test Stat 1.07 1.08 5.01 25 0.986	Critical 54.6 54.6 12.6 2.37 0.947	P-Value 1.0000 1.0000 0.5428 0.3064 0.8828	Decision(Non-Signit Non-Signit Equal Vari Equal Vari Normal Di	α:5%) ficant Heter ficant Heter ances ances stribution		
Pure Error Residual A Attribute Goodness-o Variances Distribution	of-Fit	0.318038 0.748148 1.066186 Method Pearson C Likelihood Bartlett Eq Mod Lever	0.0° 0.0° 0.0° Chi-Sq GOF Ratio GOF quality of Va ne Equality (ilk W Norm	7951 21376 27338 	4 35 39 Test Stat 1.07 1.08 5.01 e 1.25	Critical 54.6 54.6 12.6 2.37 0.947 2.49	P-Value 1.0000 1.0000 0.5428 0.3064 0.8828 0.5857	Decision(Non-Signit Non-Signit Equal Vari Equal Vari Normal Di	α:5%) ficant Heter ficant Heter ances ances stribution		
Pure Error Residual A Attribute Goodness-o Variances Distribution	of-Fit mmary	0.318038 0.748148 1.066186 Method Pearson C Likelihood Bartlett Eq Mod Lever Shapiro-W Anderson-	0.0 0.0 0.0 2 2 3 4 5 6 6 7 7 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	7951 21376 27338 ariance of Variance nality Normality	4 35 39 Test Stat 1.07 1.08 5.01 1.25 0.986 0.309	Critical 54.6 54.6 12.6 2.37 0.947 2.49	P-Value 1.0000 1.0000 0.5428 0.3064 0.8828 0.5857	Decision(Non-Signit Non-Signit Equal Vari Equal Vari Normal Di Normal Di	α:5%) ficant Hetero ficant Hetero fances fances fances stribution stribution	ogenity	
Pure Error Residual A Attribute Goodness-o Variances Distribution Weight Sur Group	of-Fit mmary Contr	0.318038 0.748148 1.066186 Method Pearson C Likelihood Bartlett Eq Mod Lever Shapiro-W Anderson-	0.0° 0.0° 0.0° Chi-Sq GOF Ratio GOF quality of Va ne Equality filk W Norn Darling A2	7951 21376 27338 ariance of Variance nality Normality Mean	4 35 39 Test Stat 1.07 1.08 5.01 1.25 0.986 0.309	Critical 54.6 54.6 12.6 2.37 0.947 2.49 Ca	P-Value 1.0000 1.0000 0.5428 0.3064 0.8828 0.5857 alculated Var	Decision(Non-Signif Non-Signif Equal Vari Equal Vari Normal Di Normal Di	a:5%) Ficant Hetero Ficant Hetero Finances Finan	ogenity %Effect	
Pure Error Residual A Attribute Goodness-o Variances Distribution Weight Sur Group	of-Fit mmary Contr	0.318038 0.748148 1.066186 Method Pearson C Likelihood Bartlett Eq Mod Lever Shapiro-W Anderson-	0.0° 0.0° 0.0° 0.0° 0.0° 0.0° 0.0° 0.0°	7951 21376 27338 ariance of Variance nality Normality Mean 5.21	4 35 39 Test Stat 1.07 1.08 5.01 2 1.25 0.986 0.309 Min 4.87	Critical 54.6 54.6 12.6 2.37 0.947 2.49 Ca Max 5.62	P-Value 1.0000 1.0000 0.5428 0.3064 0.8828 0.5857 alculated Var Std Err 0.122	Decision(Non-Signif Non-Signif Equal Vari Equal Vari Normal Di Normal Di iate Std Dev 0.298	a:5%) ficant Hetero ficant Hetero ances fances stribution stribution CV% 5.72%	%Effect	
Pure Error Residual A Attribute Goodness-o Variances Distribution Weight Sur Group 0 0.0001	of-Fit mmary Contr	0.318038 0.748148 1.066186 Method Pearson C Likelihood Bartlett Eq Mod Lever Shapiro-W Anderson-	0.0° 0.0° 0.0° 0.0° 0.0° 0.0° 0.0° 0.0°	7951 21376 27338 ariance of Variance hality Normality Mean 5.21 4.56	4 35 39 Test Stat 1.07 1.08 5.01 1.25 0.986 0.309 Min 4.87 3.84	Critical 54.6 54.6 12.6 2.37 0.947 2.49 Ca Max 5.62 5.25	P-Value 1.0000 1.0000 0.5428 0.3064 0.8828 0.5857 alculated Var Std Err 0.122 0.208	Decision(Non-Signif Non-Signif Equal Vari Equal Vari Normal Di Normal Di iate Std Dev 0.298 0.508	cc:5%) ficant Heteroricant Heteroricances fances fances faribution stribution CV% 5.72% 11.1%	%Effect 0.0% 12.5%	
Pure Error Residual A Attribute Goodness-o Variances Distribution Weight Sur Group 0 0.0001 0.0003	of-Fit mmary Contr	0.318038 0.748148 1.066186 Method Pearson C Likelihood Bartlett Eq Mod Lever Shapiro-W Anderson-	0.0° 0.0° 0.0° 0.0° 0.0° 0.0° 0.0° 0.0°	7951 21376 27338 ariance of Variance nality Normality Mean 5.21 4.56 4.21	4 35 39 Test Stat 1.07 1.08 5.01 1.25 0.986 0.309 Min 4.87 3.84 3.82	Critical 54.6 54.6 12.6 2.37 0.947 2.49 Ca Max 5.62 5.25 4.55	P-Value 1.0000 1.0000 0.5428 0.3064 0.8828 0.5857 stculated Var Std Err 0.122 0.208 0.116	Decision(Non-Signif Non-Signif Equal Vari Equal Vari Normal Di Normal Di iate Std Dev 0.298 0.508 0.283	a:5%) ficant Hetero ficant Hetero ances ances stribution stribution CV% 5.72% 11.1% 6.73%	% Effect 0.0% 12.5% 19.3%	
Pure Error Residual A Attribute Goodness-CVariances Distribution Weight Sur Group 0 0.0001 0.0003 0.0009	of-Fit mmary Contr	0.318038 0.748148 1.066186 Method Pearson C Likelihood Bartlett Eq Mod Lever Shapiro-W Anderson-	0.0° 0.0° 0.0° 0.0° 0.0° 0.0° 0.0° 0.0°	7951 21376 27338 ariance of Variance hality Normality Mean 5.21 4.56 4.21 4.17	4 35 39 Test Stat 1.07 1.08 5.01 1.25 0.986 0.309 Min 4.87 3.84 3.82 3.83	Critical 54.6 54.6 12.6 2.37 0.947 2.49 Ca Max 5.62 5.25 4.55 4.4	P-Value 1.0000 1.0000 0.5428 0.3064 0.8828 0.5857 slculated Var Std Err 0.122 0.208 0.116 0.0806	Decision(Non-Signif Non-Signif Equal Vari Equal Vari Normal Di Normal Di iate Std Dev 0.298 0.508 0.283 0.197	a:5%) ficant Heteroficant Heteroficant Heteroficant Heteroficant Heteroficances stribution CV% 5.72% 11.1% 6.73% 4.73%	%Effect 0.0% 12.5% 19.3% 19.9%	
Pure Error Residual A Attribute Goodness-o Variances Distribution Weight Sur Group 0 0.0001 0.0003	of-Fit mmary Contr	0.318038 0.748148 1.066186 Method Pearson C Likelihood Bartlett Eq Mod Lever Shapiro-W Anderson-	0.0° 0.0° 0.0° 0.0° 0.0° 0.0° 0.0° 0.0°	7951 21376 27338 ariance of Variance nality Normality Mean 5.21 4.56 4.21	4 35 39 Test Stat 1.07 1.08 5.01 1.25 0.986 0.309 Min 4.87 3.84 3.82	Critical 54.6 54.6 12.6 2.37 0.947 2.49 Ca Max 5.62 5.25 4.55	P-Value 1.0000 1.0000 0.5428 0.3064 0.8828 0.5857 stculated Var Std Err 0.122 0.208 0.116	Decision(Non-Signif Non-Signif Equal Vari Equal Vari Normal Di Normal Di iate Std Dev 0.298 0.508 0.283	a:5%) ficant Hetero ficant Hetero ances ances stribution stribution CV% 5.72% 11.1% 6.73%	% Effect 0.0% 12.5% 19.3%	

05 Feb-13 16:51 (p 4 of 4) 48718015 Soybea | 10-7295-8436

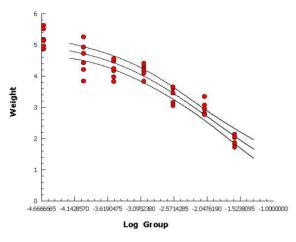
OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

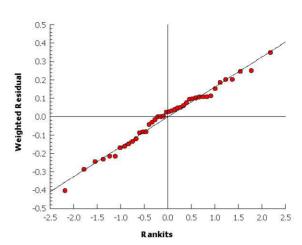
Wildlife International

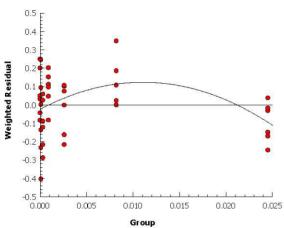
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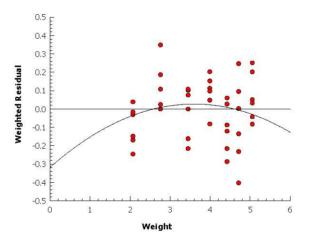
Graphics

3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]









CETIS Summary Report

Report Date: 05 Feb-13 16:51 (p 1 of 3) **Test Code:** 48718015 Soybea | 10-7295-8436 05 Feb-13 16:51 (p 1 of 3)

							Test Code: 48718015 Soybea 10-7295-84
OCSPP 850.41	150 Terrestrial Plan	t Tier II (Vegeta	ative Vigor)				Wildlife Internation
Batch ID:	19-9144-5306	Test Type:	Vegetative Vi	gor Tier II			Analyst:
Start Date:	10 Aug-11	Protocol:	OCSPP 850.4	1150 Plant Ve	getative Vig	or	Diluent:
Ending Date:	31 Jan-13 13:44	Species:	Glycine max				Brine:
Duration:	540d 14h	Source:	Missouri Four	ndation Seeds	, MO		Age:
Sample ID:	14-0575-3397	Code:	48718015				Client: CDMSmith
Sample Date:	10 Aug-11	Material:	Dicamba (#19	918-00-9)			Project:
Receive Date:	31 Jan-13 13:44	Source:	BASF Corpor	ation			
Sample Age:	NA	Station:					
Comparison S	Gummary						
Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
21-2408-1449	Height	0.000	3 0.0009	0.0005196	5.48%		Dunnett Multiple Comparison Test
19-7088-0458	Height	0.000	1 0.0003	0.0001732	4.18%		Williams Multiple Comparison Test
04-3972-7164	Survival	0.024	5 >0.0245	NA	NA		Jonckheere-Terpstra Step-Down Test
08-0392-2524	Survival	0.024	5 >0.0245	NA	NA		Mann-Whitney U Two-Sample Test
07-0868-8781	Weight	<0.00	01 0.0001	NA	7.75%		Dunnett Multiple Comparison Test
16-0848-9647	Weight	<0.00	01 0.0001	NA	5.91%		Williams Multiple Comparison Test
Point Estimate	e Summary						
Analysis ID	Endpoint	Level		95% LCL	95% UCL	TU	Method
19-4390-5979	Height	IC5	0.00005	37 1.97E-05	0.0001		Nonlinear Regression
		IC10	0.000149	9.75E-05	0.000214		
		IC25	0.000826	0.000664	0.00102		
		IC50	0.00552	0.00485	0.00627		
03-1477-9420	Weight	IC5	0.00006	17 1.51E-05	0.000137		Nonlinear Regression
		IC10	0.000197	7 0.000109	0.000317		
		IC25	0.00137	0.00102	0.00181		

0.0119 0.00965 0.0146

IC50

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48718015 Soybea | 10-7295-8436

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)	Wildlife International

Height Sur	mmary										
Group	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Solvent Blank	6	46.6	44.2	49.1	43.8	49.6	0.963	2.36	5.06%	0.0%
0	Negative Control	6	45.9	43.9	47.9	43.6	49.4	0.781	1.91	4.16%	1.5%
0.0001		6	44.6	42.4	46.8	41.8	47	0.839	2.06	4.61%	4.36%
0.0003		6	43.7	41.2	46.2	40.4	46.2	0.974	2.39	5.45%	6.22%
0.0009		6	33.1	30.9	35.4	31.2	37	0.873	2.14	6.45%	28.9%
0.0026		6	27.6	26.5	28.6	26.6	29	0.421	1.03	3.74%	40.9%
0.0082		6	20.7	18.9	22.5	19.2	23.6	0.696	1.7	8.25%	55.7%
0.0245		6	14.9	13.7	16.1	13.8	17	0.473	1.16	7.77%	68.0%

Survival Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Solvent Blank	6	1	1	1	1	1	0	0	0.0%	0.0%
0	Negative Control	6	1	1	1	1	1	0	0	0.0%	0.0%
0.0001		6	1	1	1	1	1	0	0	0.0%	0.0%
0.0003		6	1	1	1	1	1	0	0	0.0%	0.0%
0.0009		6	1	1	1	1	1	0	0	0.0%	0.0%
0.0026		6	1	1	1	1	1	0	0	0.0%	0.0%
0.0082		6	1	1	1	1	1	0	0	0.0%	0.0%
0.0245		6	1	1	1	1	1	0	0	0.0%	0.0%

Weight Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Solvent Blank	6	4.88	4.41	5.35	4.44	5.64	0.182	0.446	9.14%	0.0%
0	Negative Control	6	5.21	4.9	5.52	4.87	5.62	0.122	0.298	5.72%	-6.76%
0.0001		6	4.56	4.03	5.09	3.84	5.25	0.208	0.508	11.1%	6.56%
0.0003		6	4.21	3.91	4.5	3.82	4.55	0.116	0.283	6.73%	13.8%
0.0009		6	4.17	3.96	4.38	3.83	4.4	0.0806	0.197	4.73%	14.5%
0.0026		6	3.42	3.15	3.7	3.05	3.65	0.107	0.261	7.63%	29.9%
0.0082		6	2.97	2.75	3.2	2.76	3.34	0.0859	0.21	7.08%	39.0%
0.0245		6	1.94	1.77	2.1	1.72	2.13	0.0641	0.157	8.1%	60.3%

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Test Code: 48718015 Soybea | 10-7295-8436

International
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Height Detail										
Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6			
0	Solvent Blank	45.8	48.8	44.4	49.6	47.4	43.8			
0	Negative Control	43.6	46.2	45.6	49.4	45.2	45.6			
0.0001		43.4	47	44.2	47	44.2	41.8			
0.0003		42.6	42	45.6	46.2	45.6	40.4			
0.0009		31.2	32.2	33.4	37	33.6	31.4			
0.0026		29	26.8	28.2	26.6	28.2	26.6			
0.0082		20	19.4	21.8	23.6	20	19.2			
0.0245		13.8	14.2	14.2	15	15.2	17			

Survival Detail

Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	1	1	1	1	1	1
0	Negative Control	1	1	1	1	1	1
0.0001		1	1	1	1	1	1
0.0003		1	1	1	1	1	1
0.0009		1	1	1	1	1	1
0.0026		1	1	1	1	1	1
0.0082		1	1	1	1	1	1
0.0245		1	1	1	1	1	1

Weight Detail

Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	4.44	4.94	4.44	5.64	5.02	4.8
0	Negative Control	5.17	5.62	4.87	5.51	5.13	4.96
0.0001		4.21	5.25	3.84	4.72	4.42	4.92
0.0003		4.17	4.24	4.48	4.55	3.97	3.82
0.0009		4.3	3.83	4.22	4.4	4.09	4.19
0.0026		3.64	3.05	3.45	3.59	3.65	3.15
0.0082		2.8	2.94	3.34	3.07	2.94	2.76
0.0245		1.83	2.03	2.13	1.86	1.72	2.05

CETIS Summary Report

Report Date:

0.001602 0.000678 0.0026

0.004036 0.002672 0.005713

0.01126 0.00898 0.01412

IC10 IC25

IC50

02 Nov-16 08:53 (p 1 of 3)

3	yport			Test Code:		de: 48718015 tom 00-7031-7		7031-14	13	
OCSPP 850.4	150 Terrestrial Plant	Tier II (Veget	ative Vigor)				į	Wildlife Inte	ernation	al
Batch ID: Start Date: Ending Date: Duration:	16-5421-8393 12 Oct-11 31 Jan-13 13:57 477d 14h	Test Type: Protocol: Species: Source:	Vegetative Vigor Tier II OCSPP 850.4150 Plant Vegetative V Lycopersicon esculentum Meyer Seed Co., Baltimore, MD	/igor	Analys Diluen Brine: Age:	t:	on ovan			
Sample ID: Sample Date: Receipt Date: Sample Age:	31 Jan-13 13:57	Code: Material: Source: Station:	48718015 Dicamba (#1918-00-9) BASF Corporation		Client: Projec		Smith - J.	Gaidos		
Multiple Com	parison Summary									
Analysis ID	Endpoint	Comp	oarison Method	NO	EL	LOEL	TOEL	TU	PMSD	√
10-6400-3022	Height	Dunn	ett Multiple Comparison Test	0.00	26	0.0076	0.004445		10.2%	
18-4059-6771	Height	Willia	ms Multiple Comparison Test	0.00	26	0.0076	0.004445		7.95%	
04-3584-7883	Survival	Jonck	heere-Terpstra Step-Down Test	0.00	76	0.0224	0.01305		n/a	
00-6768-1453	Survival	Mann	-Whitney U Two-Sample Test	0.02	24 >	0.0224	n/a		12.8%	
07-1591-8880	Weight	Dunn	ett Multiple Comparison Test	< 0.00	03	0.0003	n/a		12.6%	✓
01-8249-8426	Weight	Willia	ms Multiple Comparison Test	< 0.00	03	0.0003	n/a		9.81%	✓
Point Estimat	e Summary									
Analysis ID	Endpoint	Point	Estimate Method	Lev	el	lbs ai/A	95% LCL	95% UCL	TU	✓
20-8595-1698	Height	Regre	ession: 3P Cum Log-Normal (Probit)	IC5		0.001596	0.000527	0.002445		
				IC10)	0.002566	0.001569	0.003563		
				IC2	5	0.005677	0.004385	0.007128		
				IC50		0.01372	0.01209	0.01556		
09-7215-4910	Survival	Regre	ession: Log-Normal (Probit)	EC5		0.009482	0.00131	0.01437		
				EC1		0.01329	0.004587	0.0203		
				EC2		0.02337	0.01564	0.0861		
				EC5		0.04375	0.02604	1.006		
19-8303-7791	Weight	Regre	ession: 3P Cum Log-Normal (Probit)	IC5		0.0009219	n/a	0.001734		✓

02 Nov-16 08:53 (p 2 of 3)

CETIS Sumn	пагу кер	юп			Test Code:		48718015 tom 00-7031-1413				
OCSPP 850.4150) Terrestrial	l Plant Tier I	l (Vegetativ	e Vigor)						Wildlife Int	ernational
Height Summary	,										
Conc-lbs ai/A	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	% Effect
0	N	6	50.2	47.1	53.3	46.8	54.4	1.204	2.95	5.88%	0.00%
0	S	6	53.87	49.77	57.97	48	58.4	1.596	3.908	7.26%	-7.30%
0.0003		6	50.97	47.51	54.43	47.6	54.6	1.346	3.297	6.47%	-1.53%
0.0009		6	54.6	48.82	60.38	48.6	61	2.249	5.508	10.09%	-8.76%
0.0026		6	52.32	49.21	55.42	48.8	57.4	1.207	2.956	5.65%	-4.22%
0.0076		6	31.63	26.4	36.87	26.6	38	2.035	4.985	15.76%	36.99%
0.0224		6	19.55	17.77	21.33	16.5	21.4	0.6927	1.697	8.68%	61.06%
Survival Summa	ry										
Conc-lbs ai/A	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	% Effect
0	N	6	0.9667	0.8810	1.0000	0.8000	1.0000	0.0333	0.0817	8.45%	0.00%
0	S	6	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	-3.45%
0.0003		6	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	-3.45%
0.0009		6	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	-3.45%
0.0026		6	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	-3.45%
0.0076		6	0.9667	0.8810	1.0000	0.8000	1.0000	0.0333	0.0817	8.45%	0.00%
0.0224		6	0.7667	0.4877	1.0000	0.4000	1.0000	0.1085	0.2658	34.67%	20.69%
Weight Summar	у										
Conc-lbs ai/A	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	% Effect
0	N	6	5.458	4.92	5.996	4.74	6.07	0.2093	0.5127	9.39%	0.00%
0	S	6	5.54	5.198	5.882	4.97	5.97	0.1332	0.3262	5.89%	-1.50%
0.0003		6	4.625	4.141	5.109	4.01	5.32	0.1884	0.4615	9.98%	15.27%
0.0009		6	4.028	3.661	4.396	3.38	4.3	0.143	0.3503	8.70%	26.20%
0.0026		6	4.222	3.387	5.057	3.03	5.45	0.3249	0.7957	18.85%	22.66%
0.0076		6	3.148	2.808	3.488	2.75	3.68	0.1322	0.3239	10.29%	42.32%
0.0224		6	1.485	0.9918	1.978	0.85	2	0.1919	0.47	31.65%	72.79%

02 Nov-16 08:53 (p 3 of 3) 48718015 tom | 00-7031-1413

OCSPP 850.4150) Terrestrial		Wildlife International					
Height Detail								
Conc-lbs ai/A	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	
0	N	47.4	46.8	52.4	54.4	51	49.2	
0	s	48	58.4	57.6	53.6	51.2	54.4	
0.0003		47.6	54.6	54	53.2	48.6	47.8	
0.0009		50.8	61	58.8	58.8	49.6	48.6	
0.0026		53	48.8	57.4	50.5	53	51.2	
0.0076		31.6	28.4	37.4	26.6	27.8	38	
0.0224		19.8	19	16.5	21.4	20	20.6	
Survival Detail								
Conc-lbs ai/A	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	
0	N	1.0000	0.8000	1.0000	1.0000	1.0000	1.0000	
0	S	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
0.0003		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
0.0009		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
0.0026		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
0.0076		1.0000	1.0000	1.0000	0.8000	1.0000	1.0000	
0.0224		1.0000	0.6000	0.4000	1.0000	0.6000	1.0000	
Weight Detail								
Conc-lbs ai/A	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	
0	N	6.07	4.74	5.68	5.86	5	5.4	
0	S	5.5	5.65	4.97	5.52	5.63	5.97	
0.0003		4.33	4.86	4.44	4.01	4.79	5.32	
0.0009		4.29	4.1	3.9	4.2	4.3	3.38	
0.0026		3.83	5.45	4.5	3.03	4.22	4.3	
0.0076		2.75	3.2	3.68	3.11	2.89	3.26	
0.0224		1.26	1.12	0.85	1.84	1.84	2	
Survival Binomia	als							
Conc-lbs ai/A	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	
0	N	5/5	4/5	5/5	5/5	5/5	5/5	
0	S	5/5	5/5	5/5	5/5	5/5	5/5	
0.0003		5/5	5/5	5/5	5/5	5/5	5/5	
0.0009		5/5	5/5	5/5	5/5	5/5	5/5	
0.0026		5/5	5/5	5/5	5/5	5/5	5/5	
		C IC	C IC		A IE			
0.0076		5/5	5/5	5/5	4/5	5/5	5/5	

CETIS Analytical Report

Report Date: Test Code: 02 Nov-16 08:50 (p 1 of 12) 48718015 tom | 00-7031-1413

OCSPP 850.415	0 Terrestrial	Plant Tier	II (Vegetat	ive Vigor)						1	Wildlife In	ternational
	10-6400-3022 02 Nov-16 8:4		-	Height Parametric-Cor	ntrol vs Tre	eatn	ments		S Version: ial Results		9.2	
Batch ID: 1	6-5421-8393	Te	est Type: \	√egetative Vig	or Tier II			Anal	yst: E. [Donovan		
Start Date: 1	2 Oct-11	Pr	otocol:	OCSPP 850.41	50 Plant \	/eg	etative Vigo	or Dilu e	ent:			
Ending Date: 3	1 Jan-13 13:5	57 S r	oecies: l	_ycopersicon e	sculentum	1		Brine	e:			
Duration: 4	77d 14h	Sc	ource: 1	Meyer Seed Co	o., Baltimo	re,	MD	Age:				
Sample ID: 0	7-9276-7154	Co	ode: 4	18718015				Clier	nt: CD	M Smith - J.	Gaidos	
Sample Date: 1	2 Oct-11	M	aterial: [Dicamba (#191	8-00-9)			Proje	ect:			
Receipt Date: 3	1 Jan-13 13:5	57 S c	ource: [BASF Corporat	tion							
Sample Age: n.	/a	St	ation:									
Data Transform	l	Alt Hyp	1					NOEL	LOEL	TOEL	TU	PMSD
Untransformed		C > T						0.0026	0.0076	0.004445		10.19%
Dunnett Multipl	e Compariso	n Test										
Control vs	Conc-It	s ai/A	Test St	at Critical	MSD E	DF	P-Type	P-Value	Decision	(α:5%)		
Negative Control	0.0003		-0.35	2.335	5.116 1	10	CDF	0.9164	Non-Sign	ificant Effect		
	0.0009		-2.009	2.335	5.116 1	10	CDF	0.9994	Non-Sign	ificant Effect		
	0.0026		-0.9662	2.335	5.116 1	10	CDF	0.9820	Non-Sign	ificant Effect		
	0.0076*		8.475	2.335			CDF	<1.0E-37	Significan			
	0.0224*		13.99	2.335	5.116 1	10	CDF	<1.0E-37	Significan	t Effect		
ANOVA Table												
Source	Sum Sq	uares	Mean S	Square	DF		F Stat	P-Value	Decision	(α:5%)		
Between	6093.03		1218.6	1	5		84.64	<1.0E-37	Significan	it Effect		
Error	431.91		14.397		30							
Total	6524.94				35							
Distributional T	ests											
Attribute	Test				Test Sta	at	Critical	P-Value	Decision	(α:1%)		
Variances	Bartlett E	Equality of \	/ariance Te	est	7.431		15.09	0.1905	Equal Va			
Distribution	Shapiro-	Wilk W Nor	mality Test		0.9556		0.9166	0.1567	Normal D	istribution		
Height Summar	у											
Conc-lbs ai/A	Code	Count	Mean	95% LCL	95% UC	L	Median	Min	Max	Std Err	CV%	%Effect
0	N	6	50.2	47.1	53.3		50.1	46.8	54.4	1.204	5.88%	0.00%
0.0003		6	50.97	47.51	54.43		50.9	47.6	54.6	1.346	6.47%	-1.53%
0.0009		6	54.6	48.82	60.38		54.8	48.6	61	2.249	10.09%	-8.76%
0.0026		6	52.32	49.21	55.42		52.1	48.8	57.4	1.207	5.65%	-4.22%
0.0076		6	31.63	26.4	36.87		30	26.6	38	2.035	15.76%	36.99%
0.0224		6	19.55	17.77	21.33		19.9	16.5	21.4	0.6927	8.68%	61.06%
Height Detail												
neight Detail												
Conc-lbs ai/A	Code	Rep 1	Rep 2	Rep 3	Rep 4		Rep 5	Rep 6				
Conc-lbs ai/A	Code N	47.4	46.8	52.4	54.4		51	49.2				
0 0.0003		47.4 47.6	46.8 54.6	52.4 54	54.4 53.2		51 48.6	49.2 47.8				
0 0.0003 0.0009		47.4 47.6 50.8	46.8 54.6 61	52.4 54 58.8	54.4 53.2 58.8		51 48.6 49.6	49.2 47.8 48.6				
0 0.0003 0.0009 0.0026		47.4 47.6 50.8 53	46.8 54.6 61 48.8	52.4 54 58.8 57.4	54.4 53.2 58.8 50.5	:	51 48.6 49.6 53	49.2 47.8 48.6 51.2				
0 0.0003 0.0009		47.4 47.6 50.8	46.8 54.6 61	52.4 54 58.8	54.4 53.2 58.8		51 48.6 49.6	49.2 47.8 48.6				

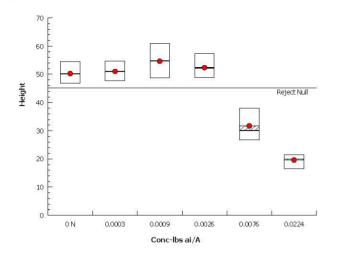
000-302-176-9 CETIS™ v1.9.2.6 Analyst:_____ QA:____

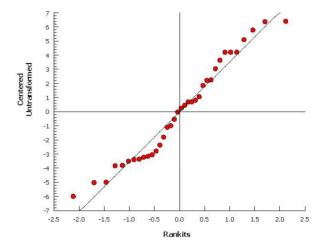
02 Nov-16 08:50 (p 2 of 12) 48718015 tom | 00-7031-1413

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Wildlife International

Analysis ID:	10-6400-3022	Endpoint:	Height	CETIS Version:	CETISv1.9.2
Analyzed:	02 Nov-16 8:47	Analysis:	Parametric-Control vs Treatments	Official Results:	Yes





CETIS Analytical Report

Report Date: Test Code: 02 Nov-16 08:50 (p 3 of 12) 48718015 tom | 00-7031-1413

OCSPP 850.4150) Terrestrial I	Plant Tier I	l (Vegeta	tive Vigor)						,	Wildlife In	ternational
•	8-4059-6771 2 Nov-16 8:4		•	Height Parametric-Co	ontrol vs Or	d.Tr	eatments		ΠS Version cial Result		9.2	
Start Date: 12 Ending Date: 31	S-5421-8393 2 Oct-11 1 Jan-13 13:57 77d 14h	Pro 7 Sp	otocol: ecies:	Vegetative Vig OCSPP 850.4 Lycopersicon Meyer Seed C	150 Plant \ esculentum	1	-		ient: ne:	Donovan		
Sample ID: 07 Sample Date: 12 Receipt Date: 31 Sample Age: n/	Jan-13 13:57	Ma 7 So	terial:	48718015 Dicamba (#19 BASF Corpora	,			Clie Pro	ent: CE ject:	DM Smith - J.	Gaidos	
Data Transform		Alt Hyp						NOEL	LOEL	TOEL	TU	PMSD
Untransformed		C > T						0.0026	0.0076	0.004445		7.95%
Williams Multipl	a Camparica											
Williams Multipl Control vs	Conc-lbs		Test S				P-Type	P-Value	Decision	<u> </u>		
Negative Control	0.0003		-0.35 -1.179	1.697		10 (>0.05 >0.05	•	nificant Effect nificant Effect		
	0.0009 0.0026		-0.966	1.776 2 1.801	3.891 1 3.945 1		CDF	>0.05 >0.05	_	nificant Effect nificant Effect		
	0.0026		8.475	1.814	3.974 1			<0.05 <0.05		nt Effect		
	0.0076		13.99	1.821	3.989 1			<0.05	Significa			
ANOVA Table												
Source	Sum Squ	ares	Mean :	Square	DF	F	F Stat	P-Value	Decision	n(α:5%)		
Between	6093.03		1218.6	:1	5	8	84.64	<1.0E-37	⁷ Significa	nt Effect		
Error	431.91		14.397	•	30							
Total	6524.94				35							
Distributional Te	ests											
Attribute	Test				Test Sta	at (Critical	P-Value	Decision	n(α:1%)		
Variances	Bartlett Ed	quality of V	ariance T	est	7.431	1	15.09	0.1905	Equal Va	<u> </u>		
Distribution	Shapiro-V	Vilk W Norr	nality Tes	t	0.9556	(0.9166	0.1567	Normal [Distribution		
Height Summary	/											
Conc-lbs ai/A	Code	Count	Mean	95% LCL	. 95% UC	L	Median	Min	Max	Std Err	CV%	%Effect
0	N	6	50.2	47.1	53.3		50.1	46.8	54.4	1.204	5.88%	0.00%
0.0003		6	50.97	47.51	54.43		50.9	47.6	54.6	1.346	6.47%	-1.53%
0.0009		6	54.6	48.82	60.38		54.8	48.6	61	2.249	10.09%	-8.76%
0.0026		6	52.32	49.21	55.42		52.1	48.8	57.4	1.207	5.65%	-4.22%
0.0076		6	31.63	26.4	36.87		30	26.6	38	2.035	15.76%	36.99%
0.0224		6	19.55	17.77	21.33	1	19.9	16.5	21.4	0.6927	8.68%	61.06%
Height Detail												
Conc-lbs ai/A	Code	Rep 1	Rep 2	Rep 3	Rep 4		Rep 5	Rep 6				
0	N	47.4	46.8	52.4	54.4		51 40 C	49.2				
0.0003		47.6	54.6	54	53.2		48.6 48.6	47.8				
0.0009		50.8	61	58.8	58.8		49.6	48.6				
0.0026		53	48.8	57.4	50.5		53	51.2				
0.0076		31.6	28.4	37.4	26.6		27.8	38				
0.0224		19.8	19	16.5	21.4	2	20	20.6				

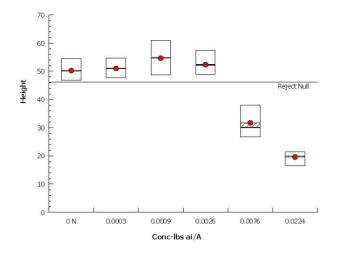
000-302-176-9 CETIS™ v1.9.2.6 Analyst:_____ QA:____

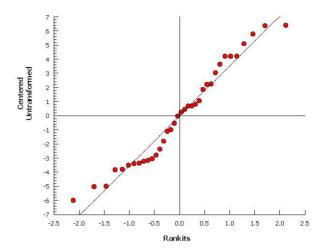
02 Nov-16 08:50 (p 4 of 12) 48718015 tom | 00-7031-1413

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Wildlife International

Analysis ID:	18-4059-6771	Endpoint:	Height	CETIS Version:	CETISv1.9.2
Analyzed:	02 Nov-16 8:48	Analysis:	Parametric-Control vs Ord.Treatments	Official Results:	Yes





CETIS Analytical Report

Report Date: Test Code: 02 Nov-16 08:50 (p 5 of 12) 48718015 tom | 00-7031-1413

OCSPP 850.4150	Terrestrial F	Plant Tier II (Veg	etative V	igor)							,	Wildlife Int	ernational	
•)-6768-1453 2 Nov-16 8:47	Endpoint 7 Analysis:		Survival Nonparametric-Two Sample					CETIS Version: CETISv1.9.2 Official Results: Yes					
Batch ID: 16-	-5421-8393	Test Type	e: Veget	ative Vigor	vigor Tier II Analyst: E. Donovan									
	Oct-11	Protocol	OCSF	PP 850.4150 Plant Vegetative Vigor Diluent:										
Ending Date: 31	Jan-13 13:57	Species:	Lycop	ersicon es	culentur	n		E	3rine	:				
Duration: 47	7d 14h	Source:	Meyei	r Seed Co.	, Baltim	ore,	MD	- 1	Age:					
•	-9276-7154	Code:	48718	3015					Clien		M Smith - J.	Gaidos		
Sample Date: 12	Oct-11	Material:	Dicam	nba (#1918	3-00-9)			F	Proje	ct:				
Receipt Date: 31			BASF	Corporation	on									
Sample Age: n/a	!	Station:												
Data Transform		Alt Hyp						NOEL	-	LOEL	TOEL	TU	PMSD	
Untransformed		C > T						0.022	4 >	0.0224	n/a		12.81%	
Mann-Whitney U	Two-Sample	e Test												
Control vs	Conc-lbs		t Stat C	Critical			P-Type	P-Val		Decision	(α:5%)			
Negative Control	0.0003	15		n/a			Exact	1.000		-	ficant Effect			
	0.0009	15		n/a	1		Exact	1.000		•	ficant Effect			
	0.0026	15		n/a - /-	1		Exact	1.000		_	ificant Effect			
	0.0076 0.0224	18 25.		n/a n/a	2		Exact Exact	0.772 0.090		_	ificant Effect ificant Effect			
	0.0224	25.3) 1	1/a	ı	10	Exact	0.090	9	Non-Sign	ilicani Eneci			
ANOVA Table														
Source	Sum Squ		an Squar	re e	DF_		F Stat	P-Val		Decision	<u> </u>			
Between	0.25	0.0			5		3.571	0.011	9	Significan	t Effect			
Error Total	0.42	0.0	14		30 35		_							
Distributional Te														
Attribute	Test					Critical	P-Val	,						
Variances		quality of Variance		_4	26.12		3.699	<1.0E		7 Unequal Variances Unequal Variances				
Variances		ne Equality of Val		st	15		3.699	2.1E-0		Non-Normal Distribution				
Distribution	-	Vilk W Normality	esi		0.7481		0.9166	1.0E-	J6	INON-INONI	iai Distributio	ווכ		
Survival Summa	-		_											
Conc-lbs ai/A	Code	Count Mea			95% U	CL	Median	Min		Max	Std Err	CV%	%Effect	
0	N	6 0.90		0.8810	1.0000		1.0000	0.800	-	1.0000	0.0333	8.45%	0.00%	
0.0003		6 1.00		1.0000	1.0000		1.0000	1.000		1.0000	0.0000	0.00%	-3.45%	
0.0009		6 1.00		1.0000	1.0000		1.0000	1.000		1.0000	0.0000	0.00%	-3.45% 3.45%	
0.0026 0.0076		6 1.00 6 0.90		1.0000 0.8810	1.0000		1.0000 1.0000	1.000 0.800		1.0000 1.0000	0.0000 0.0333	0.00% 8.45%	-3.45% 0.00%	
0.0224		6 0.70		0.4877	1.0000		0.8000	0.400		1.0000	0.1085	34.67%	20.69%	
Survival Detail														
Conc-lbs ai/A	Code	Rep 1 Rep) 2 F	Rep 3	Rep 4		Rep 5	Rep 6	;					
0	N	1.0000 0.80		1.0000	1.0000		1.0000	1.000						
0.0003		1.0000 1.00		1.0000	1.0000		1.0000	1.000						
0.0009		1.0000 1.00		1.0000	1.0000		1.0000	1.000						
0.0026		1.0000 1.00		1.0000	1.0000		1.0000	1.000						
0.0076		1.0000 1.00		1.0000	0.8000		1.0000	1.000						
0.0224		1.0000 0.60		0.4000	1.0000		0.6000	1.000						
··		3.2.2.2							•					

000-302-176-9 CETIS™ v1.9.2.6 Analyst:_____ QA:____

02 Nov-16 08:51 (p 6 of 12) 48718015 tom | 00-7031-1413

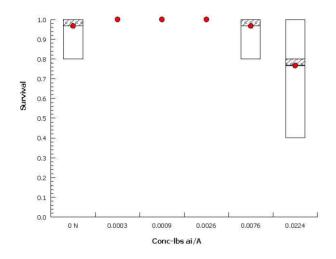
OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

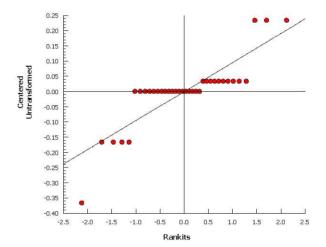
Wildlife International

Analysis ID:	00-6768-1453	Endpoint:	Survival	CETIS Version:	CETISv1.9.2
Analyzed:	02 Nov-16 8:47	Analysis:	Nonnarametric-Two Sample	Official Results:	Vec

Survival Binomials

Conc-lbs ai/A	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	N	5/5	4/5	5/5	5/5	5/5	5/5
0.0003		5/5	5/5	5/5	5/5	5/5	5/5
0.0009		5/5	5/5	5/5	5/5	5/5	5/5
0.0026		5/5	5/5	5/5	5/5	5/5	5/5
0.0076		5/5	5/5	5/5	4/5	5/5	5/5
0.0224		5/5	3/5	2/5	5/5	3/5	5/5





CETIS Analytical Report

Report Date: Test Code: 02 Nov-16 08:51 (p 7 of 12) 48718015 tom | 00-7031-1413

OCSPP 850.415	0 Terrestrial	Plant Tier	II (Vegeta	ative Vi	gor)							Wildlife In	ternationa
Analysis ID:	04-3584-7883	•							CET	IS Version:	CETISv1	.9.2	
Analyzed:	02 Nov-16 8:4	8 A r	nalysis:	Nonpar	rametric-	Control vs (Ord. Treatm	ents	Offic	ial Results	: Yes		
Batch ID: 1	6-5421-8393	Te	st Type:	Vegeta	tive Viac	or Tier II				yst: E. C	on ovan		
	2 Oct-11		otocol:			50 Plant Ve	getative Vid	nor	Dilu	•			
Ending Date: 3			ecies:			sculentum	90.00.00	,	Brin				
	77d 14h		ource:			o., Baltimore	MD		Age:				
Duration. 4	.,,,d 1411		Juice.	Wieger		o., Daitiiriore	, IVID		Aye.	•			
Sample ID: 0	7-9276-7154	Co	ode:	487180)15				Clie	nt: CDI	∕I Smith - J.	Gaidos	
Sample Date: 1	12 Oct-11		aterial:	Dicamb	oa (#191	8-00-9)			Proj	ect:			
Receipt Date: 3	ipt Date: 31 Jan-13 13:57		ource:	BASF (Corporat	ion							
Sample Age: n	/a	St	ation:										
Data Transform	1	Alt Hyp						NOI	ΕL	LOEL	TOEL	TU	
Untransformed		C > T						0.00	76	0.0224	0.01305		
Jonckheere-Te	rpstra Step-D	own Test											
Control vs	Conc-lb	s ai/A	Test S	Stat Cı	ritical	Ties	P-Type	P-V	alue	Decision((α:5%)		
Negative Contro	0.0003		-1	1.	645	1	Asymp	0.91	01	_	ficant Effec		
	0.0009		-1.225	5 1.	645	1	Asymp	0.91	01	Non-Signi	ficant Effec	t .	
	0.0026		-1.342	2 1.	645	1	Asymp	0.91	01	Non-Signi	ficant Effec	İ.	
	0.0076		0	1.	645	2	Asymp	0.50	000	_	ficant Effec	t	
	0.0224*		1.941	1.	645	3	Asymp	0.02	261	Significan	t Effect		
ANOVA Table													
Source	Sum Squ	uares	Mean	Square	•	DF	F Stat	P-V	alue	Decision((α:5%)		
Between	0.25		0.05			5	3.571	0.01	19	Significan	t Effect		
Error	0.42		0.014			30	_						
Total	0.67					35							
Distributional T	ests												
Attribute	Test					Test Stat	Critical	P-V	alue	Decision(α:1%)		
Variances	Levene E	Equality of \	/ariance T	「est		26.12	3.699	<1.0	E-37	Unequal \	/ariances		
Variances	Mod Leve	ene Equalit	y of Varia	nce Tes	t	15	3.699	2.1E	E-07	Unequal \	/ariances		
Distribution	Shapiro-\	Wilk W Nor	mality Tes	st		0.7481	0.9166	1.8E	E-06	Non-Normal Distribution			
Survival Summ	ary												
Conc-lbs ai/A	Code	Count	Mean			95% UCL		Min		Max	Std Err	CV%	%Effect
0	N	6	0.966	7 0.	8810	1.0000	1.0000	0.80	000	1.0000	0.0333	8.45%	0.00%
0.0003		6	1.0000		0000	1.0000	1.0000	1.00		1.0000	0.0000	0.00%	-3.45%
0.0009		6	1.0000		0000	1.0000	1.0000	1.00		1.0000	0.0000	0.00%	-3.45%
0.0026		6	1.0000		0000	1.0000	1.0000	1.00		1.0000	0.0000	0.00%	-3.45%
0.0076		6	0.966		8810	1.0000	1.0000	0.80		1.0000	0.0333	8.45%	0.00%
0.0224		6	0.766	7 0.	4877	1.0000	0.8000	0.40	000	1.0000	0.1085	34.67%	20.69%
Survival Detail													
Conc-lbs ai/A	Code	Rep 1	Rep 2		ер 3	Rep 4	Rep 5	Rep					
0	N	1.0000	0.8000		0000	1.0000	1.0000	1.00					
0.0003		1.0000	1.0000	0 1.	0000	1.0000	1.0000	1.00	00				
0.0009		1.0000	1.0000	0 1.	0000	1.0000	1.0000	1.00	00				
0.0026		1.0000	1.0000	0 1.	0000	1.0000	1.0000	1.00	00				
0.0076		1.0000	1.0000	0 1.	0000	0.8000	1.0000	1.00	00				
0.0224		1.0000	0.6000		4000	1.0000	0.6000	1.00	00				
			0.000	- 0.	.555		0.0000	1.00	55				

000-302-176-9 CETIS™ v1.9.2.6 Analyst:_____ QA:____

02 Nov-16 08:51 (p 8 of 12) 48718015 tom | 00-7031-1413

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

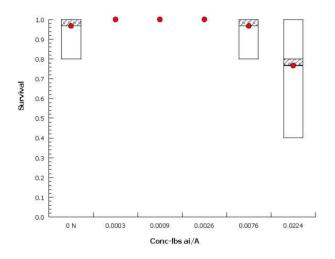
Wildlife International

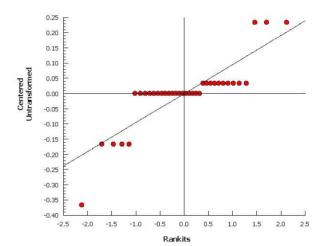
Analysis ID: 04-3584-7883 Endpoint: Survival CETIS Version: CETIS V1.9.2

Analyzed: 02 Nov-16 8:48 Analysis: Nonparametric-Control vs Ord. Treatments Official Results: Yes

Survival Binomials

Conc-lbs ai/A	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	N	5/5	4/5	5/5	5/5	5/5	5/5
0.0003		5/5	5/5	5/5	5/5	5/5	5/5
0.0009		5/5	5/5	5/5	5/5	5/5	5/5
0.0026		5/5	5/5	5/5	5/5	5/5	5/5
0.0076		5/5	5/5	5/5	4/5	5/5	5/5
0.0224		5/5	3/5	2/5	5/5	3/5	5/5





CETIS Analytical Report

Report Date: Test Code: 02 Nov-16 08:51 (p 9 of 12) 48718015 tom | 00-7031-1413

OCSPP 850.4150	Terrestrial I	Plant Tier I	l (Vegetati	ve Vigor)							Wildlife In	ternational
•	7-1591-8880 2 Nov-16 8:4	•		-						n: CETISv [*] ts: Yes	1.9.2	
Batch ID: 16-	-5421-8393	Tes	st Type: ∨	egetative Vigo	or Tier II			Ana	lyst: E.	Donovan		
	Oct-11			CSPP 850.41			getati∨e Vi	-				
Ending Date: 31		7 S p		ycopersicon e				Brin				
Duration: 47	7d 14h	So	urce: M	leyer Seed Co	o., Baltim	ore	, MD	Age				
Sample ID: 07-	-9276-7154	Co	de: 4	8718015				Clie	nt: CE	DM Smith - J.	Gaidos	
Sample Date: 12	Oct-11	Ma	terial: D	icamba (#191	8-00-9)			Proj	ect:			
Receipt Date: 31				ASF Corporat	ion							
Sample Age: n/a	l	Sta	ition:									
Data Transform		Alt Hyp						NOEL	LOEL	TOEL	TU	PMSD
Untransformed		C > T						< 0.0003	0.0003	n/a		12.58%
Dunnett Multiple	Compariso	n Test										
Control vs	Control	II	Test Sta	t Critical	MSD	DF	P-Type	P-Value	Decisio	n(α:5%)		
Negative Control	0.0003*		2.833	2.335	0.687	10	CDF	0.0167	Significa	int Effect		
	0.0009*		4.861	2.335	0.687	10	CDF	8.1E-05	Significa	int Effect		
	0.0026*		4.204	2.335	0.687	10	CDF	5.0E-04	Significa	int Effect		
	0.0076*		7.853	2.335	0.687	10	CDF	<1.0E-37	Significa	int Effect		
	0.0224*		13.51	2.335	0.687	10	CDF	<1.0E-37	Significa	int Effect		
ANOVA Table												
Source	Sum Squ	ares	Mean S	DF F Stat		P-Value	Decisio	n(α:5%)				
Between	56.6394	56.6394		11.3279		5 43.64		<1.0E-37	<1.0E-37 Significant Effect			
Error	7.78763		0.25958	8	30		_					
Total	64.427				35							
Distributional Te	sts											
Attribute	Test				Test S	tat	Critical	P-Value	Decisio	n(α:1%)		
Variances	Bartlett E	quality of V	ariance Tes	st	5.15		15.09	0.3978	Equal Va	ariances		
Distribution	Shapiro-V	Vilk W Norr	mality Test		0.9866	i	0.9166	0.9329	Normal I	Distribution		
Weight Summary	1											
Conc-lbs ai/A	Code	Count	Mean	95% LCL	95% U	CL	Median	Min	Max	Std Err	CV%	%Effect
0	N	6	5.458	4.92	5.996	_	5.54	4.74	6.07	0.2093	9.39%	0.00%
0.0003		6	4.625	4.141	5.109		4.615	4.01	5.32	0.1884	9.98%	15.27%
0.0009		6	4.028	3.661	4.396		4.15	3.38	4.3	0.143	8.70%	26.20%
0.0026		6	4.222	3.387	5.057		4.26	3.03	5.45	0.3249	18.85%	22.66%
0.0076		6	3.148	2.808	3.488		3.155	2.75	3.68	0.1322	10.29%	42.32%
11.11.2.20		6	1.485	0.9918	1.978		1.55	0.85	2	0.1919	31.65%	72.79%
Weight Detail												
Weight Detail Conc-lbs ai/A	Code	Rep 1	Rep 2	Rep 3	Rep 4		Rep 5	Rep 6				
Weight Detail Conc-lbs ai/A	Code N	6.07	4.74	5.68	5.86		5	5.4				
Weight Detail Conc-lbs ai/A 0 0.0003		6.07 4.33	4.74 4.86	5.68 4.44	5.86 4.01		5 4.79	5.4 5.32				
Conc-lbs ai/A 0 0.0003 0.0009		6.07 4.33 4.29	4.74 4.86 4.1	5.68 4.44 3.9	5.86 4.01 4.2		5 4.79 4.3	5.4 5.32 3.38				
Weight Detail Conc-lbs ai/A 0 0.0003 0.0009 0.0026		6.07 4.33 4.29 3.83	4.74 4.86 4.1 5.45	5.68 4.44 3.9 4.5	5.86 4.01 4.2 3.03		5 4.79 4.3 4.22	5.4 5.32 3.38 4.3				
Weight Detail Conc-lbs ai/A		6.07 4.33 4.29	4.74 4.86 4.1	5.68 4.44 3.9	5.86 4.01 4.2		5 4.79 4.3	5.4 5.32 3.38				

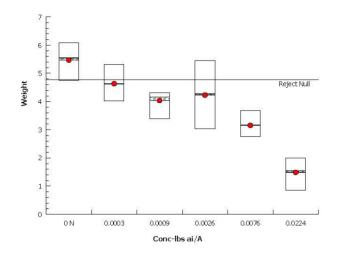
000-302-176-9 CETIS™ v1.9.2.6 Analyst:_____ QA:____

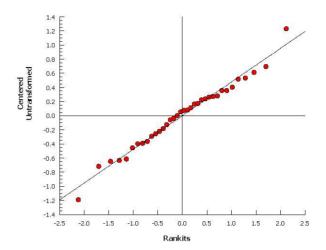
02 Nov-16 08:51 (p 10 of 12) 48718015 tom | 00-7031-1413

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Wildlife International

Analysis ID:	07-1591-8880	Endpoint:	Weight	CETIS Version:	CETISv1.9.2
Analyzed:	02 Nov-16 8:47	Analysis:	Parametric-Control vs Treatments	Official Posults:	Vec





Report Date: Test Code: 02 Nov-16 08:51 (p 11 of 12) 48718015 tom | 00-7031-1413

								ı	est Cod	ie:	48718	DID tom UL	J-7031-141.
OCSPP 850.4150	Terrestrial F	Plant Tier II	(Vegeta	tive Vigor)								Wildlife In	ternational
-	-8249-8426 ! Nov-16 8:48		dpoint: alysis:	Weight Parametric-Cor	ntrol vs O	rd.1	Treatments		ETIS V		: CETISv ^r s: Yes	1.9.2	
Batch ID: 16-	5421-8393	Tes	t Type:	Vegetative Vigo	or Tier II			A	nalyst:	E.	Donovan		
Start Date: 12	Oct-11			OCSPP 850.41		Veg	getative Vig		iluent:				
Ending Date: 31	Jan-13 13:57	Spe	ecies:	Lycopersicon e	sculentui	m		Е	rine:				
Duration: 477	'd 14h	Sou	ırce:	Meyer Seed Co	o., Baltim	ore,	, MD	Д	ge:				
•	9276-7154	Cod		48718015					lient:	CD	M Smith - J.	Gaidos	
Sample Date: 12				Dicamba (#191	,			P	roject:				
Receipt Date: 31	Jan-13 13:57			BASF Corporat	ion								
Sample Age: n/a		Sta	tion:										
Data Transform		Alt Hyp						NOEL	LC	EL	TOEL	TU	PMSD
Untransformed		C > T						< 0.0003	3 0.	0003	n/a		9.81%
Williams Multiple	Compariso	n Test											
Control vs	Control I	I	Test S	tat Critical			P-Type	P-Valu			η(α:5%)		
Negative Control	0.0003*		2.833	1.697			CDF	<0.05		-	nt Effect		
	0.0009*		4.861	1.776			CDF	<0.05		-	nt Effect		
	0.0026*		4.533	1.801	0.53		CDF	<0.05			nt Effect		
	0.0076*		7.853	1.814	0.534			<0.05		-	nt Effect		
	0.0224*		13.51	1.821	0.536	10	CDF	<0.05	Si	gnificai	nt Effect		
ANOVA Table													
Source	Sum Squa	ares		Square	DF		F Stat	P-Valu	ie De	cisior	ι(α:5%)		
Between	56.6394		11.327	9	5		43.64	<1.0E	-37 Si	gnifica	nt Effect		
Error	7.78763		0.2595	88	30		_						
Total	64.427				35								
Distributional Tes	sts												
Attribute	Test					at	Critical	P-Valu			η(α:1%)		
Variances		uality of Va			5.15		15.09	0.3978		-	riances		
Distribution	Shapiro-W	/ilk W Norm	nality Tes	t	0.9866		0.9166	0.9329	e No	rmal E	Distribution		
Weight Summary													
Conc-lbs ai/A	Code	Count	Mean	95% LCL		CL	Median	Min	Ma		Std Err	CV%	%Effect
0	N	6	5.458	4.92	5.996		5.54	4.74	6.0		0.2093	9.39%	0.00%
0.0003		6	4.625	4.141	5.109		4.615	4.01	5.3		0.1884	9.98%	15.27%
0.0009		6	4.028	3.661	4.396		4.15	3.38	4.3		0.143	8.70%	26.20%
0.0026		6	4.222	3.387	5.057		4.26	3.03	5.4		0.3249	18.85%	22.66%
0.0076		6	3.148	2.808	3.488		3.155	2.75	3.0	58	0.1322	10.29%	42.32%
0.0224		6	1.485	0.9918	1.978		1.55	0.85	2		0.1919	31.65%	72.79%
Weight Detail													
Conc-lbs ai/A	Code	Rep 1	Rep 2	Rep 3	Rep 4		Rep 5	Rep 6					
0	N	6.07	4.74	5.68	5.86		5	5.4					
0.0003		4.33	4.86	4.44	4.01		4.79	5.32					
		4.29	4.1	3.9	4.2		4.3	3.38					
0.0009													
0.0026		3.83	5.45	4.5	3.03		4.22	4.3					
								4.3 3.26 2					

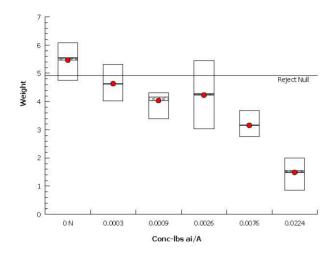
000-302-176-9 CETIS™ v1.9.2.6 Analyst:_____ QA:____

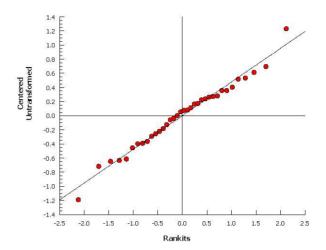
02 Nov-16 08:51 (p 12 of 12) 48718015 tom | 00-7031-1413

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Wildlife International

Analysis ID:01-8249-8426Endpoint:WeightCETIS Version:CETIS V1.9.2Analyzed:02 Nov-16 8:48Analysis:Parametric-Control vs Ord.TreatmentsOfficial Results:Yes





Report Date: Test Code: 02 Nov-16 08:52 (p 1 of 2) 48718015 tom | 00-7031-1413

OCSPP	850.415	0 Terrestria	Plant Ti	ier II (\	Vegetati	ve Vigor)						Wildlife	Internationa
Analysi		09-7215-491			oint: S		. (0110			S Version:	CETISv1	.9.2	
Analyze	ea:	02 Nov-16 8:	47	Analy	/SIS: L	inear Regress	ion (GLIVI)		Offic	ial Results:	: Yes		
Batch I	D : 1	6-5421-8393		Test ⁻	Type: ∨	egetative Vigo	or Tier II		Anal	yst: E. D	onovan		
Start D		2 Oct-11		Proto	ocol: O	CSPP 850.41	50 Plant Veç	getative Vigo	or Dilu e	ent:			
Ending	Date: 3	1 Jan-13 13:	57	Speci	ies: L	ycopersicon e	sculentum		Brin	e:			
Duratio	on: 4	77d 14h		Sourc	ce: M	leyer Seed Co	o., Baltimore,	MD	Age:				
Sample		7-9276-7154		Code		8718015			Clier		/I Smith - J.	Gaidos	
	Date: 1			Mater		icamba (#191	*		Proj	ect:			
•		1 Jan-13 13:	5/	Source		ASF Corporat	ion						
Sample	Age: n	/a 		Statio	on:								
Linear	Regress	ion Options											
Model I		Link Fu			Zero Thi	old Option	Thresh 0	Optimized No	Pooled No	Het Corr No	Weighted Yes	i	
	-	bbit) η=in∨ Φ	.111		Zelo IIII	resnoiu	-	INO	140	INO	165		
_	sion Su	=	BIO		na	O!	44: D2	E 04-4	0-1411	D Value	D! -!	(50/)	
Iters 8	-12.21	28.86	BIC 31.22		Mu -1.359	Sigma 0.4038	Adj R2	F Stat 0.02668	Critical 2.991	P-Value 0.9940	Decision Non-Signi	,	ck of Fit
Point F	stimates												
Level	lbs ai//		L 95%	IICI									
EC5	0.0094		0.014										
	0.0132												
EC10													
	0.0233	7 0.01564	0.086	31									
EC25													
EC25 EC50	0.0233 0.0437	5 0.02604											
EC25 EC50 Regres	0.0233 0.0437 sion Par		1.006	3	95% LC	L 95% UCL	t Stat	P-Value	Decision	(a:5%)			
EC25 EC50 Regres Parame	0.0233 0.0437 sion Par	5 0.02604 ameters	1.006	6 Error	95% LC 0.5947	L 95% UCL 4.359	t Stat 2.579	P-Value 0.0154	Decision Significan	(α:5%) t Parameter			
EC25 EC50 Regres Parame Slope	0.0233 0.0437 sion Par	5 0.02604 ameters Estimat	1.006 e Std E	Error 02		4.359			Significan	· ,			
EC25 EC50 Regres Parame Slope Intercep	0.0233 0.0437 sion Par eter	5 0.02604 cameters Estimat 2.477	1.006 e Std E 0.960	Error 02	0.5947	4.359	2.579	0.0154	Significan	t Parameter			
EC25 EC50 Regres Parame Slope Intercep	0.0233 0.0437 sion Par eter ot	5 0.02604 cameters Estimat 2.477	1.006 e Std E 0.960 1.718	Error 02 3	0.5947	4.359 3 6.733	2.579	0.0154	Significan	t Parameter ficant Param			
EC25 EC50 Regres Parame Slope Intercep ANOVA	0.0233 0.0437 sion Par eter ot	5 0.02604 rameters Estimat 2.477 3.366	1.006 e Std E 0.960 1.718	Error 02 3	0.5947 -0.00153 n Square	4.359 3 6.733	2.579 1.959	0.0154 0.0601 P-Value	Significan Non-Signi	t Parameter ficant Param (α:5%)			
EC25 EC50 Regres Parame Slope Intercep ANOVA Source Model	0.0233 0.0437 sion Par eter ot	5 0.02604 rameters Estimat 2.477 3.366 Sum Sc 2197000 0.04982	1.006 e Std E 0.960 1.718	Error 02 3 Mean 21970 0.016	0.5947 -0.00153 n Square 0000	4.359 3 6.733 DF 1 3	2.579 1.959 F Stat	0.0154 0.0601 P-Value	Significan Non-Signi Decision	t Parameter ficant Param			
EC25 EC50 Regres Parame Slope Intercep ANOVA Source Model Lack of Pure Er	0.0233 0.0437 sion Pareter ot A Table	5 0.02604 cameters Estimat 2.477 3.366 Sum Sc 2197000 0.04982 15.56	1.006 e Std E 0.960 1.718	Error 02 3 Mean 21970 0.016 0.622	0.5947 -0.00153 n Square 0000 661	4.359 3 6.733 DF 1 3 25	2.579 1.959 F Stat 39410000	0.0154 0.0601 P-Value <1.0E-37	Significan Non-Signi Decision	t Parameter ficant Param			
EC25 EC50 Regres Parame Slope Intercep ANOVA Source Model Lack of Pure Er	0.0233 0.0437 sion Pareter ot A Table	5 0.02604 rameters Estimat 2.477 3.366 Sum Sc 2197000 0.04982	1.006 e Std E 0.960 1.718	Error 02 3 Mean 21970 0.016	0.5947 -0.00153 n Square 0000 661	4.359 3 6.733 DF 1 3	2.579 1.959 F Stat 39410000	0.0154 0.0601 P-Value <1.0E-37	Significan Non-Signi Decision	t Parameter ficant Param			
EC25 EC50 Regres Parame Slope Intercep ANOVA Source Model Lack of Pure Er Residua	0.0233 0.0437 sion Pareter ot A Table	5 0.02604 cameters Estimat 2.477 3.366 Sum Sc 2197000 0.04982 15.56 15.61	1.006 e Std E 0.960 1.718	Error 02 3 Mean 21970 0.016 0.622	0.5947 -0.00153 n Square 0000 661	4.359 3 6.733 DF 1 3 25	2.579 1.959 F Stat 39410000 0.02668	0.0154 0.0601 P-Value <1.0E-37 0.9940	Significan Non-Signi Decision	t Parameter ficant Param			
EC25 EC50 Regres Parame Slope Intercep ANOVA Source Model Lack of Pure Er Residua Residu	0.0233 0.0437 sion Pareter Table Fit ror al al Analyte	5 0.02604 cameters Estimat 2.477 3.366 Sum Sc 2197000 0.04982 15.56 15.61 sis Method	1.006 e Std E 0.960 1.718 uares	Mean 21970 0.016 0.622 0.557	0.5947 -0.00153 n Square 0000 661 24	4.359 6.733 DF 1 3 25 28	2.579 1.959 F Stat 39410000 0.02668	0.0154 0.0601 P-Value <1.0E-37 0.9940 P-Value	Significan Non-Signi Decision Significan Non-Signi	t Parameter ficant Param (a:5%) t ficant	neter		
EC25 EC50 Regres Parame Slope Intercep ANOVA Source Model Lack of Pure Er Residua Residu	0.0233 0.0437 sion Pareter talenter Table Fit fror al	5 0.02604 cameters Estimat 2.477 3.366 Sum Sc 2197000 0.04982 15.56 15.61 sis Method Pearsor	1.006 e Std E 0.960 1.718 uares	Mean 21970 0.016 0.622 0.557	0.5947 -0.00153 • Square 0000 661 24 -75	4.359 6.733 DF 1 3 25 28 Test Stat 15.61	2.579 1.959 F Stat 39410000 0.02668 Critical 41.34	0.0154 0.0601 P-Value <1.0E-37 0.9940 P-Value 0.9713	Significan Non-Signi Decision Significan Non-Signi Decision	t Parameter ficant Param (a:5%) t ficant (a:5%)	neter		
EC25 EC50 Regres Parame Slope Intercep ANOVA Source Model Lack of Pure Er Residua Residua Attribut Goodne	0.0233 0.0437 sion Pareter ot Table Fit Tror al al Analy: te ess-of-Fit	5 0.02604 rameters Estimat 2.477 3.366 Sum Sc 2197000 0.04982 15.56 15.61 sis Method Pearsor Likeliho	1.006 e Std E 0.960 1.718 uares 00 Chi-Sq 0 od Ratio	Mean 21970 0.016 0.622 0.557	0.5947 -0.00153 • Square 0000 661 24 25	4.359 6.733 DF 1 3 25 28 Test Stat 15.61 16.25	2.579 1.959 F Stat 39410000 0.02668 Critical 41.34 41.34	0.0154 0.0601 P-Value <1.0E-37 0.9940 P-Value 0.9713 0.9619	Decision Decision Significan Non-Signi Non-Signi Non-Signi	t Parameter ficant Param (a:5%) t ficant (a:5%) ficant Heteroficant Heteroficant	neter		
EC25 EC50 Regres Parame Slope Intercep ANOVA Source Model Lack of Pure Er Residua Attribut Goodne	0.0233 0.0437 sion Pareter ot Table Fit Tror al al Analy: te ess-of-Fit	5 0.02604 rameters Estimat 2.477 3.366 Sum Sc 2197000 0.04982 15.56 15.61 sis Method Pearsor Likeliho Mod Lev	e Std E 0.960 1.718 uares 00 Chi-Sq 0 od Ratio ovene Equ	Error D2 3 Mean 21970 0.016 0.622 0.557 GOF T GOF T ality of	0.5947 -0.00153 • Square 0000 661 24 75	4.359 6.733 DF 1 3 25 28 Test Stat 15.61 16.25 e 6.441	2.579 1.959 F Stat 39410000 0.02668 Critical 41.34 41.34 2.759	0.0154 0.0601 P-Value <1.0E-37 0.9940 P-Value 0.9713 0.9619 0.0010	Decision Non-Signi Decision Non-Signi Non-Signi Unequal	t Parameter ficant Param (a:5%) t ficant (a:5%) ficant Hetero ficant Hetero / ariances	ogeneity ogeneity		
EC25 EC50 Regres Parame Slope Intercep ANOVA Source Model Lack of Pure Er Residua Attribut Goodne	0.0233 0.0437 sion Pareter ot Table Fit Tror al al Analy: te ess-of-Fit	5 0.02604 rameters Estimat 2.477 3.366 Sum Sc 2197000 0.04982 15.56 15.61 sis Method Pearsor Likeliho Mod Ley Shapiro	e Std E 0.960 1.718 uares 00 Chi-Sq 0 od Ratio ovene Equ	Mean 21970 0.016 0.622 0.557 GOF T GOF T lality of	0.5947 -0.00153 n Square 0000 661 24 75 Test f Varianc lity Test	4.359 6.733 DF 1 3 25 28 Test Stat 15.61 16.25	2.579 1.959 F Stat 39410000 0.02668 Critical 41.34 41.34	0.0154 0.0601 P-Value <1.0E-37 0.9940 P-Value 0.9713 0.9619	Decision Non-Signi Decision Non-Signi Non-Signi Unequal \ Non-Norm	t Parameter ficant Param (a:5%) t ficant (a:5%) ficant Heteroficant Heteroficant	ogeneity ogeneity on		
Regres Parame Slope Intercep ANOVA Source Model Lack of Pure Er Residua Attribut Goodne Varianc Distribu	0.0233 0.0437 sion Pareter ot Table Fit Tor al al Analyte ess-of-Fit	5 0.02604 rameters Estimat 2.477 3.366 Sum Sc 2197000 0.04982 15.56 15.61 sis Method Pearsor Likeliho Mod Lev Shapiro Andersc	e Std E 0.960 1.718 uares 00 Chi-Sq 0 od Ratio ovene Equ	Mean 21970 0.016 0.622 0.557 GOF T GOF T lality of	0.5947 -0.00153 n Square 0000 661 24 75 Test f Varianc lity Test	4.359 3 6.733 DF 1 3 25 28 Test Stat 15.61 16.25 e 6.441 0.7702	2.579 1.959 F Stat 39410000 0.02668 Critical 41.34 41.34 2.759 0.9303 2.492	P-Value <1.0E-37 0.9940 P-Value 0.9713 0.9619 0.0010 2.0E-05 <1.0E-37	Decisional Non-Significan Non-Significan Non-Significan Non-Significan Non-Significan Non-Significan Non-Significan Non-Norm Non-Norm	t Parameter ficant Param (a:5%) t ficant (a:5%) ficant Hetero ficant Hetero / ariances nal Distribution	ogeneity ogeneity on		
EC25 EC50 Regres Parame Slope Intercep ANOVA Source Model Lack of Pure Er Residua Attribut Goodne Varianc Distribu	0.0233 0.0437 sion Pareter ot Table Fit fror al al Analy: te ess-of-Fit	5 0.02604 rameters Estimat 2.477 3.366 Sum Sc 2197000 0.04982 15.56 15.61 sis Method Pearsor Likeliho Mod Lev Shapiro Andersc	e Std E 0.960 1.718 uares 00 Chi-Sq 0 od Ratio ovene Equ	Error D2 3 Mean 21970 0.016 0.622 0.557 GOF T GOF T Golf to all the off the ormal of t	0.5947 -0.00153 n Square 0000 661 24 75 Test f Varianc lity Test	4.359 3 6.733 DF 1 3 25 28 Test Stat 15.61 16.25 e 6.441 0.7702	2.579 1.959 F Stat 39410000 0.02668 Critical 41.34 41.34 2.759 0.9303 2.492	0.0154 0.0601 P-Value <1.0E-37 0.9940 P-Value 0.9713 0.9619 0.0010 2.0E-05	Decisional Non-Significan Non-Significan Non-Significan Non-Significan Non-Significan Non-Significan Non-Significan Non-Norm Non-Norm	t Parameter ficant Param (a:5%) t ficant ficant Hetero / ariances nal Distributio	ogeneity ogeneity on	Α	В
Regres Parame Slope Intercep ANOVA Source Model Lack of Pure Er Residua Attribut Goodne Varianc Distribu Surviva Conc-It	0.0233 0.0437 sion Pareter ot Table Fit fror al al Analy: te ess-of-Fit	5 0.02604 cameters Estimat 2.477 3.366 Sum Sc 2197000 0.04982 15.56 15.61 sis Method Pearsor Likeliho Mod Lev Shapiro Anderso	e Std E 0.960 1.718 uares 00 Chi-Sq 0 od Ratio vene Equ Wilk W N on-Darling	Error D2 3 Mean 21970 0.016 0.622 0.557 GOF T GOF T ality of Normal g A2 No	0.5947 -0.00153 n Square 0000 661 64 75 Fest Fest f Varianc lity Test lormality	4.359 3 6.733 DF 1 3 25 28 Test Stat 15.61 16.25 e 6.441 0.7702 Te 3.425	2.579 1.959 F Stat 39410000 0.02668 Critical 41.34 41.34 2.759 0.9303 2.492 Calcul	P-Value <1.0E-37 0.9940 P-Value 0.9713 0.9619 0.0010 2.0E-05 <1.0E-37 ated Variate	Decisional Non-Significan Non-Significan Non-Significan Non-Significan Non-Significan Non-Significan Non-Significan Non-Norm Non-Norm Non-Norm	t Parameter ficant Param (a:5%) t ficant (a:5%) ficant Hetero ficant Hetero / ariances nal Distribution	ogeneity ogeneity on on	A 30	B 30
Regres Parame Slope Intercep ANOVA Source Model Lack of Pure Er Residua Attribut Goodne Varianc Distribu Surviva Conc-It 0.0003	0.0233 0.0437 sion Pareter ot Table Fit fror al al Analy: te ess-of-Fit	5 0.02604 cameters Estimat 2.477 3.366 Sum Sc 2197000 0.04982 15.56 15.61 sis Method Pearsor Likeliho Mod Lev Shapiro Anderso	e Std E 0.960 1.718 uares 00 Chi-Sq 0 od Ratio of the Equivalence	Error D2 3 Mean 21970 0.016 0.622 0.557 GOF T GOF T Golf T Gormal g A2 No	0.5947 -0.00153 n Square 0000 661 64 75 Fest Fest f Varianc lity Test lormality Mean	4.359 3 6.733 DF 1 3 25 28 Test Stat 15.61 16.25 e 6.441 0.7702 Te 3.425	2.579 1.959 F Stat 39410000 0.02668 Critical 41.34 41.34 2.759 0.9303 2.492 Calcul Max	P-Value <1.0E-37 0.9940 P-Value 0.9713 0.9619 0.0010 2.0E-05 <1.0E-37 ated Variate Std Err	Decision Significan Non-Signi Non-Signi Non-Signi Non-Signi Non-Signi Non-Norm Non-Norm Non-Norm	t Parameter ficant Param (a:5%) t ficant ficant Hetero /ariances hal Distributional Distributional	ogeneity ogeneity on on %Effect		
Parame Slope Intercep ANOVA Source Model Lack of Pure Er Residua Attribut Goodne Varianc Distribu	0.0233 0.0437 sion Pareter ot Table Fit fror al al Analy: te ess-of-Fit	5 0.02604 cameters Estimat 2.477 3.366 Sum Sc 2197000 0.04982 15.56 15.61 sis Method Pearsor Likeliho Mod Lev Shapiro Anderso	e Std E 0.960 1.718 uares 00 Chi-Sq 0 od Ratio of the equivalence Equivalence	Mean 21970 0.016 0.622 0.557 GOF T GOF T ality of Normal g A2 N	0.5947 -0.00153 n Square 0000 661 64 75 Fest Fest f Varianc lity Test lormality Mean 1.0000	4.359 3 6.733 DF 1 3 25 28 Test Stat 15.61 16.25 e 6.441 0.7702 Te 3.425 Min 1.0000	2.579 1.959 F Stat 39410000 0.02668 Critical 41.34 41.34 2.759 0.9303 2.492 Calcul Max 1.0000	P-Value <1.0E-37 0.9940 P-Value 0.9713 0.9619 0.0010 2.0E-05 <1.0E-37 ated Variate Std Err 0.0000	Decisione Non-Signi Decisione Non-Signi Non-Signi Non-Signi Unequal V Non-Norm Non-Norm e(A/B) Std Dev 0.0000	t Parameter ficant Param (a:5%) t ficant Hetero ficant Hetero fail Distributional	ogeneity ogeneity on on *Effect 0.0%	30	30
Regres Parame Slope Intercep ANOVA Source Model Lack of Pure Er Residua Attribut Goodne Varianc Distribu Surviva Conc-It 0.0003 0.0009	0.0233 0.0437 sion Pareter ot Table Fit fror al al Analy: te ess-of-Fit	5 0.02604 cameters Estimat 2.477 3.366 Sum Sc 2197000 0.04982 15.56 15.61 sis Method Pearsor Likeliho Mod Lev Shapiro Anderso	e Std E 0.960 1.718 uares 00 Chi-Sq 0 od Ratio vene Equ Wilk W N on-Darling Cour 6 6	Error D2 3 Mean 21970 0.016 0.622 0.557 GOF T GOF T lality of Normal g A2 No	0.5947 -0.00153 n Square 0000 661 24 75 Fest Fest Fost f Variance lity Test lormality Mean 1.0000 1.0000	4.359 3 6.733 DF 1 3 25 28 Test Stat 15.61 16.25 e 6.441 0.7702 Te 3.425 Min 1.0000 1.0000	2.579 1.959 F Stat 39410000 0.02668 Critical 41.34 41.34 2.759 0.9303 2.492 Calcul Max 1.0000 1.0000	P-Value <1.0E-37 0.9940 P-Value 0.9713 0.9619 0.0010 2.0E-05 <1.0E-37 ated Variate Std Err 0.0000 0.0000	Decisional Non-Signi Significan Non-Signi Non-Signi Unequal Non-Norm Non-Norm e(A/B) Std Dev 0.0000	t Parameter ficant Parameter ficant Parameter (a:5%) t ficant Hetero ficant Hetero fariances hal Distributional	ogeneity ogeneity on on **Effect 0.0% 0.0%	30 30	30 30

02 Nov-16 08:52 (p 2 of 2) 48718015 tom | 00-7031-1413

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Wildlife International

Analysis ID:	09-7215-4910	Endpoint:	Survival	CETIS Version:	CETISv1.9.2
Analyzed:	02 Nov-16 8:47	Analysis:	Linear Regression (GLM)	Official Results:	Yes

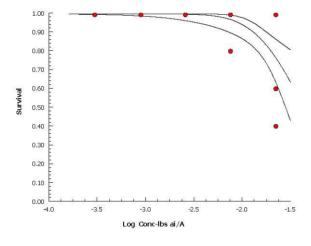
Survival Detail

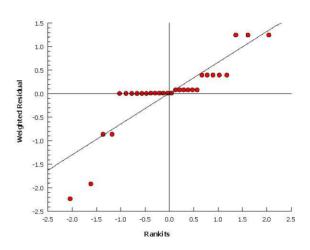
Conc-lbs ai/A	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0.0003		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
0.0009		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
0.0026		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
0.0076		1.0000	1.0000	1.0000	0.8000	1.0000	1.0000
0.0224		1.0000	0.6000	0.4000	1.0000	0.6000	1.0000

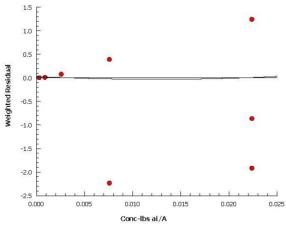
Survival Binomials

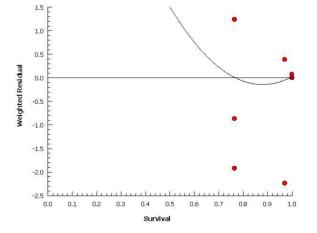
Conc-lbs ai/A	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0.0003		5/5	5/5	5/5	5/5	5/5	5/5
0.0009		5/5	5/5	5/5	5/5	5/5	5/5
0.0026		5/5	5/5	5/5	5/5	5/5	5/5
0.0076		5/5	5/5	5/5	4/5	5/5	5/5
0.0224		5/5	3/5	2/5	5/5	3/5	5/5

Log-Normal: inv $\Phi[\pi]=\alpha+\beta\cdot\log[x]$









Report Date: Test Code:

02 Nov-16 08:53 (p 1 of 4) 48718015 tom | 00-7031-1413

								Test)15 tom 0(
OCSPF	850.4150 7	Terrestrial P	Plant Tier II	(Vegetativ	e Vigor)						Wildlife Int	ernational
Analysi Analyz		8595-1698 Nov-16 8:47			ight nlinear Regre	ession (NL	R)		IS Version: ial Results:	CETISv1 Yes	.9.2	
Batch I Start D Ending Duratio	ate: 12 C Date: 31 J	421-8393 Oct-11 an-13 13:57 d 14h	Prot	ocol: OC cies: Lyc	getative Vigo SPP 850.41 copersicon e yer Seed Co	50 Plant Vosculentum	egetati∨e Vig e, MD	Anal or Dilu Brin Age:	e:	onovan		
Receip	e ID: 07-9 e Date: 12 C t Date: 31 J e Age: n/a			e rial: Did rce: BA	718015 :amba (#191 :SF Corporati			Clier Proj		l Smith - J.	Gaidos	
Non-Li	near Regres	ssion Optio	ns									
	Name and F						g Function		PTBS Fun	ction	X Trans	Y Trans
3P Cun	n Log-Norma	al (Probit): μ	=α·[1- Φ[log	[x/δ]/γ]]		Box-Cox	[ω=μ^[2·φ-2]]		Off [μ*=μ]		None	None
Regres	sion Summ	ary										
Iters	Log LL	AICc	BIC	Adj R2	Optimize	F Stat	Critical	P-Value	Decision(a:5%)		
70	-118.5	243.8	247.8	0.3387	Yes	7.805	2.922	0.0005	Significant	Lack of Fit		
Point E	stimates											
Level	lbs ai/A	95% LCL	95% UCL									
IC5	0.001596	0.000527	0.002445									
IC10	0.002566	0.001569	0.003563									
IC25	0.005677	0.004385	0.007128									
IC50	0.01372	0.01209	0.01556									
Regres	sion Param	eters										
_		eters Estimate	Std Error	95% LCL	95% UCL	t Stat	P-Value	Decision	(α:5%)			
_			Std Error	95% LCL 49.86	95% UCL 55.75	t Stat 36.47	P-Value <1.0E-37		(α:5%) t Parameter			
Parame		Estimate						Significan	•			
Parame α		Estimate 52.8	1.448	49.86	55.75	36.47	<1.0E-37	Significan Significan	t Parameter			
Parame α γ		Estimate 52.8 1.308	1.448 0.15	49.86 1.003	55.75 1.613	36.47 8.72	<1.0E-37 <1.0E-37	Significan Significan	t Parameter t Parameter			
Parame α γ δ φ	eter	52.8 1.308 0.01372	1.448 0.15	49.86 1.003	55.75 1.613	36.47 8.72	<1.0E-37 <1.0E-37	Significan Significan	t Parameter t Parameter			
Parame α γ δ φ	eter A Table	52.8 1.308 0.01372	1.448 0.15 0.001149	49.86 1.003	55.75 1.613	36.47 8.72	<1.0E-37 <1.0E-37	Significan Significan	t Parameter t Parameter t Parameter			
Parame α γ δ φ ANOVA	eter A Table	52.8 1.308 0.01372 0.2472	1.448 0.15 0.001149	49.86 1.003 0.01138 n Square	55.75 1.613 0.01605	36.47 8.72 11.94	<1.0E-37 <1.0E-37 <1.0E-37	Significan Significan Significan	t Parameter t Parameter t Parameter t Parameter			
Parame α γ δ φ ANOVA Source Model Lack of	A Table	52.8 1.308 0.01372 0.2472 Sum Squa 228.7 1.194	1.448 0.15 0.001149 ares Mea 76.2 0.39	49.86 1.003 0.01138 n Square 2	55.75 1.613 0.01605 DF 3	36.47 8.72 11.94	<1.0E-37 <1.0E-37 <1.0E-37	Significan Significan Significan	t Parameter t Parameter t Parameter t Parameter (α:5%)			
Parame α γ δ φ ANOVA Source Model Lack of	A Table	52.8 1.308 0.01372 0.2472 Sum Squa 228.7 1.194 1.529	1.448 0.15 0.001149 ares Mea 76.2 0.39 0.05	49.86 1.003 0.01138 n Square 2 79 098	55.75 1.613 0.01605 DF 3 3 3	36.47 8.72 11.94 F Stat 923.8	<1.0E-37 <1.0E-37 <1.0E-37 P-Value <1.0E-37	Significan Significan Significan Decisione Significan	t Parameter t Parameter t Parameter t Parameter (α:5%)			
Parame α γ δ φ ANOVA Source Model Lack of Pure Er Residua	A Table Fit	52.8 1.308 0.01372 0.2472 Sum Squa 228.7 1.194	1.448 0.15 0.001149 ares Mea 76.2 0.39	49.86 1.003 0.01138 n Square 2 79 098	55.75 1.613 0.01605 DF 3	36.47 8.72 11.94 F Stat 923.8	<1.0E-37 <1.0E-37 <1.0E-37 P-Value <1.0E-37	Significan Significan Significan Decisione Significan	t Parameter t Parameter t Parameter t Parameter (α:5%)			
Paramo α γ δ φ ANOV# Source Model Lack of Pure Er Residus Residus	A Table Fit Tor al	52.8 1.308 0.01372 0.2472 Sum Squa 228.7 1.194 1.529 2.723	1.448 0.15 0.001149 ares Mea 76.2 0.39 0.05	49.86 1.003 0.01138 n Square 2 79 098	55.75 1.613 0.01605 DF 3 3 30 33	36.47 8.72 11.94 F Stat 923.8 7.805	<1.0E-37 <1.0E-37 <1.0E-37 P-Value <1.0E-37 5.4E-04	Significan Significan Significan Decision Significan Significan	t Parameter t Parameter t Parameter t Parameter (a:5%) t			
Parame α γ δ φ ANOV# Source Model Lack of Pure Er Residua Residua	A Table Fit Tor al al Analysis	52.8 1.308 0.01372 0.2472 Sum Squa 228.7 1.194 1.529 2.723	1.448 0.15 0.001149 ares Mea 76.2 0.39 0.05 0.08	49.86 1.003 0.01138 n Square 2 79 098 251	55.75 1.613 0.01605 DF 3 3 30 33	36.47 8.72 11.94 F Stat 923.8 7.805	<1.0E-37 <1.0E-37 <1.0E-37 P-Value <1.0E-37 5.4E-04	Significan Significan Significan Decision Significan Significan	t Parameter t Parameter t Parameter t Parameter (\alpha:5%) t t			
Parame α γ δ φ ANOV# Source Model Lack of Pure Er Residua Residua	A Table Fit Tor al al Analysis	Estimate 52.8 1.308 0.01372 0.2472 Sum Squa 228.7 1.194 1.529 2.723 Method Bartlett Eq	1.448 0.15 0.001149 ares Mea 76.2 0.39 0.05 0.08	49.86 1.003 0.01138 n Square 2 79 098 251	55.75 1.613 0.01605 DF 3 3 30 33 Test Stat 5.716	36.47 8.72 11.94 F Stat 923.8 7.805	<1.0E-37 <1.0E-37 <1.0E-37 P-Value <1.0E-37 5.4E-04 P-Value 0.3348	Significan Significan Significan Significan Significan Significan Significan	t Parameter t Parameter t Parameter t Parameter t (a:5%) t t (a:5%)			
Parame α γ δ φ ANOVA Source Model Lack of Pure Er Residua Residua Attribua	A Table Fit Tor al Lal Analysis te	Estimate 52.8 1.308 0.01372 0.2472 Sum Squa 228.7 1.194 1.529 2.723 Method Bartlett Eq Mod Lever	1.448 0.15 0.001149 ares Mea 76.2 0.39 0.05 0.08	49.86 1.003 0.01138 n Square 2 79 098 251	55.75 1.613 0.01605 DF 3 3 3 30 33 Test Stat 5.716 2.412	36.47 8.72 11.94 F Stat 923.8 7.805 Critical 11.07 2.534	<1.0E-37 <1.0E-37 <1.0E-37 P-Value <1.0E-37 5.4E-04 P-Value 0.3348 0.0594	Significan Significan Significan Significan Significan Significan Significan Significan	t Parameter t Parameter t Parameter t Parameter t (a:5%) t t (a:5%) iances iances			
Parame α γ δ φ ANOVA Source Model Lack of Pure Er Residua Residua Attribua	A Table Fit Tor al Lal Analysis te	52.8 1.308 0.01372 0.2472 Sum Squa 228.7 1.194 1.529 2.723 Method Bartlett Eq Mod Lever Shapiro-W	1.448 0.15 0.001149 ares Mea 76.2 0.39 0.05 0.08 quality of Varine Equality of	49.86 1.003 0.01138 n Square 2 79 098 251 riance Test of Variance ality Test	55.75 1.613 0.01605 DF 3 3 30 33 Test Stat 5.716 2.412 0.9834	36.47 8.72 11.94 F Stat 923.8 7.805 Critical 11.07 2.534 0.9398	<1.0E-37 <1.0E-37 <1.0E-37 P-Value <1.0E-37 5.4E-04 P-Value 0.3348 0.0594 0.8525	Significan Significan Significan Significan Significan Significan Significan Significan Significan	t Parameter t Parameter t Parameter t Parameter t (a:5%) t t t (a:5%) iances iances istribution			
Parame α γ δ φ ANOV# Source Model Lack of Pure Er Residua Residua Attribua Variand	A Table Fit Fror al al Analysis te ees	52.8 1.308 0.01372 0.2472 Sum Squa 228.7 1.194 1.529 2.723 Method Bartlett Eq Mod Lever Shapiro-W	1.448 0.15 0.001149 ares Mea 76.2 0.39 0.05 0.08	49.86 1.003 0.01138 n Square 2 79 098 251 riance Test of Variance ality Test	55.75 1.613 0.01605 DF 3 3 30 33 Test Stat 5.716 2.412 0.9834	36.47 8.72 11.94 F Stat 923.8 7.805 Critical 11.07 2.534 0.9398 2.492	<1.0E-37 <1.0E-37 <1.0E-37 <1.0E-37 5.4E-04 P-Value 0.3348 0.0594 0.8525 0.7568	Significan Significan Significan Significan Significan Significan Significan Significan Decision Equal Var Equal Var Normal D	t Parameter t Parameter t Parameter t Parameter t (a:5%) t t t (a:5%) iances iances istribution			
Parame α γ δ φ ANOVA Source Model Lack of Pure Er Residue Residue Attribue Variand Distribue	A Table Fit Tror al Tal Analysis te tes tion Summary	52.8 1.308 0.01372 0.2472 Sum Squa 228.7 1.194 1.529 2.723 Method Bartlett Eq Mod Lever Shapiro-W Anderson-	1.448 0.15 0.001149 ares Mea 76.2 0.39 0.05 0.08 quality of Value Equality o	49.86 1.003 0.01138 n Square 2 79 098 251 riance Test of Variance ality Test Normality T	55.75 1.613 0.01605 DF 3 3 3 30 33 Test Stat 5.716 2.412 0.9834 e 0.2543	36.47 8.72 11.94 F Stat 923.8 7.805 Critical 11.07 2.534 0.9398 2.492	<1.0E-37 <1.0E-37 <1.0E-37 P-Value <1.0E-37 5.4E-04 P-Value 0.3348 0.0594 0.8525 0.7568	Significan Significan Significan Decision Significan Significan Significan Decision Equal Var Equal Var Normal D Normal D	t Parameter t Parameter t Parameter t Parameter (a:5%) t t (a:5%) iances iances istribution istribution	% Effect		
Paramo α γ δ φ ANOVA Source Model Lack of Pure Er Residua Attribu Variand Distribu Height Conc-ll	A Table Fit Tror al Tal Analysis te tes tion Summary	52.8 1.308 0.01372 0.2472 Sum Squa 228.7 1.194 1.529 2.723 Method Bartlett Eq Mod Lever Shapiro-W Anderson-	1.448 0.15 0.001149 ares Mea 76.2 0.39 0.05 0.08 quality of Variance Equality of Variance A2 I	49.86 1.003 0.01138 n Square 2 79 098 251 riance Test of Variance ality Test Normality T	55.75 1.613 0.01605 DF 3 3 30 33 Test Stat 5.716 2.412 0.9834 e 0.2543	36.47 8.72 11.94 F Stat 923.8 7.805 Critical 11.07 2.534 0.9398 2.492 Ca	<1.0E-37 <1.0E-37 <1.0E-37 P-Value <1.0E-37 5.4E-04 P-Value 0.3348 0.0594 0.8525 0.7568 alculated Var	Significan Significan Significan Decision Significan Significan Significan Normal D Normal D Normal D iate Std Dev	t Parameter t Parameter t Parameter t Parameter (α:5%) t t t (α:5%) iances iances istribution istribution	%Effect 0.0%		
Paramo α γ δ φ ANOVA Source Model Lack of Pure Er Residua Attribu Variand Distribu Height Conc-II 0	A Table Fit Tror al Tal Analysis te tes tion Summary	52.8 1.308 0.01372 0.2472 Sum Squa 228.7 1.194 1.529 2.723 Method Bartlett Eq Mod Lever Shapiro-W Anderson-	1.448 0.15 0.001149 ares Mea 76.2 0.39 0.05 0.08 quality of Value Equality of Valu	49.86 1.003 0.01138 n Square 2 79 098 251 riance Test of Variance ality Test Normality T Mean 50.2	55.75 1.613 0.01605 DF 3 3 3 30 33 Test Stat 5.716 2.412 0.9834 e 0.2543 Min 46.8	36.47 8.72 11.94 F Stat 923.8 7.805 Critical 11.07 2.534 0.9398 2.492 Ca Max 54.4	<1.0E-37 <1.0E-37 <1.0E-37 P-Value <1.0E-37 5.4E-04 P-Value 0.3348 0.0594 0.8525 0.7568 alculated Var Std Err 1.204	Significan Significan Significan Decision Significan Significan Significan Normal D Normal D Normal D iate Std Dev 2.95	t Parameter t Parameter t Parameter t Parameter (α:5%) t t t (α:5%) iances iances istribution istribution	0.0%		
Paramo α γ δ φ ANOVA Source Model Lack of Pure Er Residua Attribu Variand Distribu Height Conc-II 0 0.0003	A Table Fit Tror al Tal Analysis te tes tion Summary	52.8 1.308 0.01372 0.2472 Sum Squa 228.7 1.194 1.529 2.723 Method Bartlett Eq Mod Lever Shapiro-W Anderson-	1.448 0.15 0.001149 ares Mea 76.2 0.39 0.05 0.08 quality of Variance Equality of Variance A2 I	49.86 1.003 0.01138 n Square 2 79 098 251 riance Test of Variance ality Test Normality T Mean 50.2 50.97	55.75 1.613 0.01605 DF 3 3 30 33 Test Stat 5.716 2.412 0.9834 e 0.2543	36.47 8.72 11.94 F Stat 923.8 7.805 Critical 11.07 2.534 0.9398 2.492 Ca Max 54.4 54.6	<1.0E-37 <1.0E-37 <1.0E-37 P-Value <1.0E-37 5.4E-04 P-Value 0.3348 0.0594 0.8525 0.7568 alculated Var	Significan Significan Significan Decision Significan Significan Significan Normal D Normal D Normal D iate Std Dev	t Parameter t Parameter t Parameter t Parameter (α:5%) t t t (α:5%) iances iances istribution istribution			
Parame α γ δ φ ANOVA Source Model Lack of Pure Er Residua Residua Attribua Variand	A Table Fit Tror al Tal Analysis te tes tion Summary	52.8 1.308 0.01372 0.2472 Sum Squa 228.7 1.194 1.529 2.723 Method Bartlett Eq Mod Lever Shapiro-W Anderson-	1.448 0.15 0.001149 ares Mea 76.2 0.39 0.05 0.08 quality of Variance Equality of Variance Equality of Variance Equality of Variance Equality of Variance Equality of Variance Equality of Variance Equality of Variance Equality of Variance Equality of Variance Equality of Variance Equality of Variance Equality of Variance Equality of Variance Equality of Variance Equation (Equation 1) and the variance Equa	49.86 1.003 0.01138 n Square 2 79 098 251 riance Test of Variance ality Test Normality T Mean 50.2	55.75 1.613 0.01605 DF 3 3 3 30 33 Test Stat 5.716 2.412 0.9834 e 0.2543 Min 46.8 47.6	36.47 8.72 11.94 F Stat 923.8 7.805 Critical 11.07 2.534 0.9398 2.492 Ca Max 54.4 54.6 61	<1.0E-37 <1.0E-37 <1.0E-37 <1.0E-37 P-Value <1.0E-37 5.4E-04 P-Value 0.3348 0.0594 0.8525 0.7568 alculated Var Std Err 1.204 1.346 2.249	Significan Significan Significan Significan Significan Significan Significan Equal Var Equal Var Normal D Normal D iate Std Dev 2.95 3.297	t Parameter t Parameter t Parameter t Parameter (a:5%) t t t (a:5%) iances iances istribution istribution CV% 5.88% 6.47%	0.0% -1.53% -8.77%		
Paramo α γ δ φ ANOVA Source Model Lack of Pure Er Residua Attribua Variand Distribua Height Conc-II 0 0.0003 0.0009	A Table Fit Tror al Tal Analysis te tes tion Summary	52.8 1.308 0.01372 0.2472 Sum Squa 228.7 1.194 1.529 2.723 Method Bartlett Eq Mod Lever Shapiro-W Anderson-	1.448 0.15 0.001149 ares Mea 76.2 0.39 0.05 0.08 juality of Vaine Equality of Vain	49.86 1.003 0.01138 n Square 2 79 098 251 riance Test of Variance ality Test Normality T Mean 50.2 50.97 54.6	55.75 1.613 0.01605 DF 3 3 3 30 33 Test Stat 5.716 2.412 0.9834 e 0.2543 Min 46.8 47.6 48.6	36.47 8.72 11.94 F Stat 923.8 7.805 Critical 11.07 2.534 0.9398 2.492 Ca Max 54.4 54.6	<1.0E-37 <1.0E-37 <1.0E-37 <1.0E-37 P-Value <1.0E-37 5.4E-04 P-Value 0.3348 0.0594 0.8525 0.7568 alculated Var Std Err 1.204 1.346	Decision Significan Significan Significan Significan Significan Significan Equal Var Equal Var Normal D Normal D iate Std Dev 2.95 3.297 5.508	t Parameter t Parameter t Parameter t Parameter (a:5%) t t t (a:5%) iances iances istribution istribution CV% 5.88% 6.47% 10.09%	0.0% -1.53%		

02 Nov-16 08:53 (p 2 of 4) 48718015 tom | 00-7031-1413

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Wildlife International

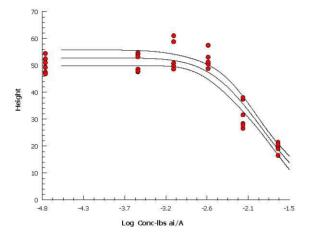
Analysis ID:	20-8595-1698	Endpoint:	Height	CETIS Version:	CETISv1.9.2
Analyzed:	02 Nov-16 8:47	Analysis:	Nonlinear Regression (NLR)	Official Results:	Yes

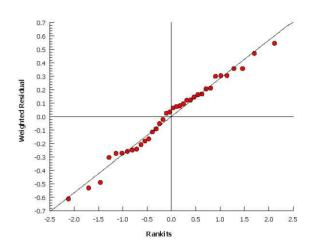
Height Detail

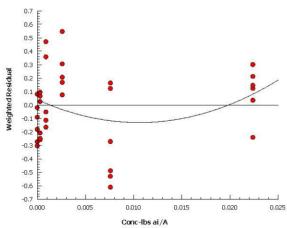
Conc-lbs ai/A	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	N	47.4	46.8	52.4	54.4	51	49.2
0.0003		47.6	54.6	54	53.2	48.6	47.8
0.0009		50.8	61	58.8	58.8	49.6	48.6
0.0026		53	48.8	57.4	50.5	53	51.2
0.0076		31.6	28.4	37.4	26.6	27.8	38
0.0224		19.8	19	16.5	21.4	20	20.6

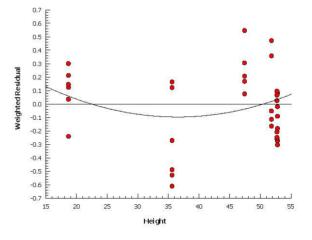
Graphics

Model: 3P Cum Log-Normal (Probit): $\mu = \alpha \cdot [1 - \Phi[\log[x/\delta]/\gamma]]$ Distribution: Box-Cox $[\omega = \mu^{2}(2 \cdot \phi - 2)]$









0.0009

0.0026

0.0076

0.0224

6

6

6

6

4.028

4.222

3.148

1.485

3.38

3.03

2.75

0.85

Report Date:

02 Nov-16 08:53 (p 3 of 4)

Test Code: 48718015 tom | 00-7031-1413 OCSPP 850,4150 Terrestrial Plant Tier II (Vegetative Vigor) Wildlife International Analysis ID: 19-8303-7791 Endpoint: Weight CETIS Version: CETISv1.9.2 Analyzed: 02 Nov-16 8:47 Analysis: Nonlinear Regression (NLR) Official Results: Yes Batch ID: 16-5421-8393 Test Type: Vegetative Vigor Tier II Analyst: E. Donovan OCSPP 850.4150 Plant Vegetative Vigor Start Date: 12 Oct-11 Protocol: Diluent: Ending Date: 31 Jan-13 13:57 Species: Lycopersicon esculentum Brine: **Duration:** 477d 14h Source: Meyer Seed Co., Baltimore, MD Age: 48718015 Sample ID: 07-9276-7154 Code: Client: CDM Smith - J. Gaidos Sample Date: 12 Oct-11 Material: Dicamba (#1918-00-9) Project: Receipt Date: 31 Jan-13 13:57 Source: **BASF** Corporation Sample Age: n/a Station: **Non-Linear Regression Options** Model Name and Function Weighting Function **PTBS** Function X Trans Y Trans 3P Cum Log-Normal (Probit): μ=α·[1- Φ[log[x/δ]/γ]] Box-Cox [ω=μ^[2·φ-2]] Off [μ*=μ] None None **Regression Summary** AICc BIC Optimize Critical P-Value Iters Log LL Adj R2 F Stat Decision(a:5%) -44.92 96.59 100.6 0.5963 5.181 2.922 0.0053 Significant Lack of Fit 89 Yes Point Estimates Ibs ai/A 95% UCL Level 95% LCL IC5 0.0009219 n/a 0.001734 IC10 0.001602 0.000678 0.0026 IC25 0.004036 0.002672 0.005713 IC50 0.01126 0.00898 0.01412 **Regression Parameters** Parameter Estimate Std Error 95% LCL 95% UCL t Stat P-Value Decision(α:5%) 4.884 0.1996 4.478 5.29 24.46 <1.0E-37 Significant Parameter α 1.522 0.248 1.017 2.026 6.135 6.5E-07 Significant Parameter 0.01126 0.001658 0.007888 0.01464 6.792 <1.0E-37 δ Significant Parameter 0.5687 Φ **ANOVA Table** Source Sum Squares Mean Square DF F Stat P-Value Decision(α:5%) Model 167.2 55.72 3 454.9 <1.0E-37 Significant Lack of Fit 1.379 0.4598 3 5.181 0.0053 Significant Pure Error 2.662 0.08875 30 Residual 4.042 0.1225 33 Residual Analysis Attribute Method Test Stat Critical P-Value Decision(a:5%) Variances Bartlett Equality of Variance Test 5.863 11.07 0.3197 Equal Variances Mod Levene Equality of Variance 1.423 2.534 0.2447 Equal Variances Distribution Shapiro-Wilk W Normality Test 0.9891 0.9398 0.9729 Normal Distribution Anderson-Darling A2 Normality Te 0.1371 2.492 1.0000 Normal Distribution Weight Summary Calculated Variate Conc-lbs ai/A Code Count Mean Min Max Std Err Std Dev CV% % Effect 0 5.458 4.74 6.07 0.2093 0.5127 9.39% 0.0% 6 0.0003 6 4.625 4.01 5.32 0.1884 0.4615 9.98% 15.27%

CETIS™ v1.9.2.6 QA:_ 000-302-176-9 Analyst:

4.3

5.45

3.68

2

0.143

0.3249

0.1322

0.1919

0.3503

0.7957

0.3239

0.47

8.70%

18.85%

10.29% 31.65% 26.2%

22.66%

42.32%

72.79%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Wildlife International

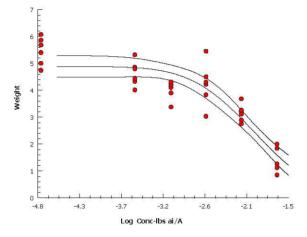
Analysis ID:	19-8303-7791	Endpoint:	Weight	CETIS Version:	CETISv1.9.2
Analyzed:	02 Nov-16 8:47	Analysis:	Nonlinear Regression (NLR)	Official Results:	Yes

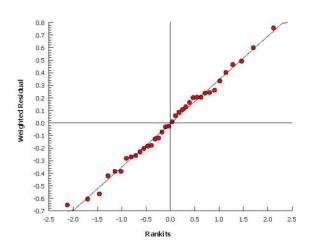
W	ei	q	ht	D	e	tai	I

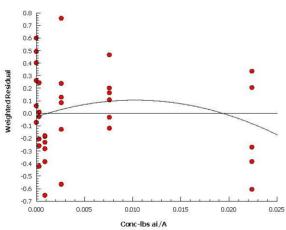
Conc-lbs ai/A	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	N	6.07	4.74	5.68	5.86	5	5.4
0.0003		4.33	4.86	4.44	4.01	4.79	5.32
0.0009		4.29	4.1	3.9	4.2	4.3	3.38
0.0026		3.83	5.45	4.5	3.03	4.22	4.3
0.0076		2.75	3.2	3.68	3.11	2.89	3.26
0.0224		1.26	1.12	0.85	1.84	1.84	2

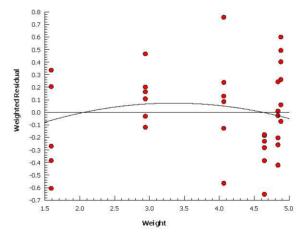
Graphics

 $Model: 3P \ Cum \ Log-Normal \ (Probit): \ \mu = \alpha \cdot [1-\Phi[log[x/\delta]/\gamma]] \qquad Distribution: \ Box-Cox \ [\omega = \mu^{2}(2-\phi-2)] \ Log-Normal \ (Probit): \ \mu = \alpha \cdot [1-\Phi[log[x/\delta]/\gamma]] \ Log-Normal \ (Probit): \ \mu = \alpha \cdot [1-\Phi[log[x/\delta]/\gamma]] \ Log-Normal \ (Probit): \ \mu = \alpha \cdot [1-\Phi[log[x/\delta]/\gamma]] \ Log-Normal \ (Probit): \ \mu = \alpha \cdot [1-\Phi[log[x/\delta]/\gamma]] \ Log-Normal \ (Probit): \ \mu = \alpha \cdot [1-\Phi[log[x/\delta]/\gamma]] \ Log-Normal \ (Probit): \ \mu = \alpha \cdot [1-\Phi[log[x/\delta]/\gamma]] \ Log-Normal \ (Probit): \ \mu = \alpha \cdot [1-\Phi[log[x/\delta]/\gamma]] \ Log-Normal \ (Probit): \ \mu = \alpha \cdot [1-\Phi[log[x/\delta]/\gamma]] \ Log-Normal \ (Probit): \ \mu = \alpha \cdot [1-\Phi[log[x/\delta]/\gamma]] \ Log-Normal \ (Probit): \ \mu = \alpha \cdot [1-\Phi[log[x/\delta]/\gamma]] \ Log-Normal \ (Probit): \ \mu = \alpha \cdot [1-\Phi[log[x/\delta]/\gamma]] \ Log-Normal \ (Probit): \ \mu = \alpha \cdot [1-\Phi[log[x/\delta]/\gamma]] \ Log-Normal \ (Probit): \ \mu = \alpha \cdot [1-\Phi[log[x/\delta]/\gamma]] \ Log-Normal \ (Probit): \ \mu = \alpha \cdot [1-\Phi[log[x/\delta]/\gamma]] \ Log-Normal \ (Probit): \ \mu = \alpha \cdot [1-\Phi[log[x/\delta]/\gamma]] \ Log-Normal \ (Probit): \ \mu = \alpha \cdot [1-\Phi[log[x/\delta]/\gamma]] \ Log-Normal \ (Probit): \ \mu = \alpha \cdot [1-\Phi[log[x/\delta]/\gamma]] \ Log-Normal \ (Probit): \ \mu = \alpha \cdot [1-\Phi[log[x/\delta]/\gamma]] \ Log-Normal \ (Probit): \ \mu = \alpha \cdot [1-\Phi[log[x/\delta]/\gamma]] \ Log-Normal \ (Probit): \ \mu = \alpha \cdot [1-\Phi[log[x/\delta]/\gamma]] \ Log-Normal \ (Probit): \ \mu = \alpha \cdot [1-\Phi[log[x/\delta]/\gamma]] \ Log-Normal \ (Probit): \ \mu = \alpha \cdot [1-\Phi[log[x/\delta]/\gamma]] \ Log-Normal \ (Probit): \ \mu = \alpha \cdot [1-\Phi[log[x/\delta]/\gamma]] \ Log-Normal \ (Probit): \ \mu = \alpha \cdot [1-\Phi[log[x/\delta]/\gamma]] \ Log-Normal \ (Probit): \ \mu = \alpha \cdot [1-\Phi[log[x/\delta]/\gamma]] \ Log-Normal \ (Probit): \ \mu = \alpha \cdot [1-\Phi[log[x/\delta]/\gamma]] \ Log-Normal \ (Probit): \ \mu = \alpha \cdot [1-\Phi[log[x/\delta]/\gamma]] \ Log-Normal \ (Probit): \ \mu = \alpha \cdot [1-\Phi[log[x/\delta]/\gamma]] \ Log-Normal \ (Probit): \ \mu = \alpha \cdot [1-\Phi[log[x/\delta]/\gamma]] \ Log-Normal \ (Probit): \ \mu = \alpha \cdot [1-\Phi[log[x/\delta]/\gamma]] \ Log-Normal \ (Probit): \ \mu = \alpha \cdot [1-\Phi[log[x/\delta]/\gamma]] \ Log-Normal \ (Probit): \ \mu = \alpha \cdot [1-\Phi[log[x/\delta]/\gamma]] \ Log-Normal \ (Probit): \ \mu = \alpha \cdot [1-\Phi[log[x/\delta]/\gamma]] \ Log-Normal \ (Probit): \ \mu = \alpha \cdot [1-\Phi[log[x/\delta]/\gamma]] \ Log-Normal \ (Probit): \ \mu = \alpha \cdot [1-\Phi[log[x/\delta]/\gamma]] \ Log-Normal \ (Probit): \ \mu = \alpha \cdot [1-\Phi[log[x/\delta]/\gamma]] \ Log-Normal \ (Prob$









CETIS Summary Report

Report Date:

05 Feb-13 16:57 (p 1 of 2)

Test Code: 48718015 Wheat | 09-8614-2525

OCSPP 850.4	150 Terrestrial Pl	ant Tier	II (Vegeta	tive Vigor)						Wildlife In	ternational
Batch ID:	20-8736-6167	Te	est Type:	Vegetative Vigo	or Tier II			Analyst:			
Start Date:	02 Sep-11	Pr	otocol:	OCSPP 850.41	50 Plant Ve	getative Vig	or	Diluent:			
Ending Date:	30 Jan-13 16:39	Sp	oecies:	Triticum aestivu	ım			Brine:			
Duration:	516d 17h	So	ource:	Johnny's Select	ted Seeds, I	ME		Age:			
Sample ID:	09-3567-4458	Co	ode:	48718015				Client: CD	MSmith		
Sample Date:	02 Sep-11	M	aterial:	Dicamba (#191	8-00-9)			Project:			
Receive Date:	: 30 Jan-13 16:39	So	ource:	BASF Corporat	ion						
Sample Age:	NA	St	ation:								
Comparison S	Summary										
Analysis ID	Endpoint		NOEL	LOEL	TOEL	PMSD	TU	Method			
13-7276-4430	Height		0.0721		0.1234	NA			ere-Terpstra	-	
21-3427-2443	Height		0.0721		0.1234	6.54%			nitney U Two		
18-8679-3747	Survival		0.6474		1.129	NA			ere-Terpstra		
15-5959-4572			1.9699		NA	3.49%			nitney U Two		
14-2369-4857	•		0.0721		0.1234	14.4%			Multiple Com	•	
20-1082-1034	Weight		0.0721	0.2111	0.1234	11.2%		Williams	Multiple Con	nparison Te	est
Point Estimat	-										
Analysis ID	Endpoint		Level		95% LCL	95% UCL	TU	Method			
15-3168-1190	Height		IC5	0.14	0.0521	0.25		Nonlinea	r Regression		
			IC10	0.335	0.192	0.515					
			IC25	1.44	1.1	1.85					
			IC50	7.29	3.61	14.7					
18-8985-4468	Weight		IC5	0.047	0.00467	0.089		Nonlinea	r Regression		
			IC10	0.0906	0.0459	0.143					
			IC25	0.272	0.191	0.372					
			IC50	0.922	0.756	1.12					
Height Summ	ary										
Group	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Solvent Blank	6	54	51.3	56.7	49	56.2	1.07	2.61	4.84%	0.0%
0	Negative Control		53.9	51.7	56.1	52.2	57.8	0.848	2.08	3.85%	0.19%
0.024		6	55.1	52.6	57.5	52	59	0.95	2.33	4.23%	-1.98%
0.0721		6	52.8	49.1	56.5	49	58.4	1.44	3.53	6.69%	2.16%
0.2111		6	51.3	49.6	53.1	49.4	53.6	0.671	1.64	3.2%	4.94%
0.6474		6	45.4	40.9	49.9	36.8	48	1.76	4.32	9.51%	15.9%
1.9699 ————		6	38.8	33.6	44	29.2	42.2	2.02	4.94	12.7%	28.1%
Survival Sum	mary										
Group	Control Type	Count	Mean	95% LCL			Max	Std Err	Std Dev	CV%	%Effect
0	Solvent Blank	6	1	1	1	1	1	0	0	0.0%	0.0%
0	Negative Control		1	1	1	1	1	0	0	0.0%	0.0%
0.024		6	1	1	1	1	1	0	0	0.0%	0.0%
0.0721		6	1	1	1	1	1	0	0	0.0%	0.0%
0.2111		6	1	1	1	1	1	0	0	0.0%	0.0%
0.6474 1.9699		6 6	1 0.967	1 0.881	1	1 0.8	1 1	0 0.0333	0 0.0816	0.0%	0.0%
	2204	J	0.967	0.001	1	0.0	1	0.0333	0.0016	8.45%	3.33%
Weight Summ	nary Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
Group 0	Solvent Blank	6	1.2	1.12	1.29	1.08	1.29	0.034	0.0833	6.93%	0.0%
0	Negative Control		1.∠ 1.18	1.12	1.29	1.08	1.29	0.034	0.0833	9.32%	0.0% 2.08%
0.024	Negative Control		1.16	1.06				0.0448	0.11		
0.024		6 6	1.∠ <i>(</i> 1.1	0.966	1.47	1.07 0.96	1.57 1.34	0.0786	0.193	15.2% 11.9%	-5.26% 8.31%
0.0721		6	0.97	0.902	1.24 1.04	0.96	1.07	0.0336	0.131	11.9% 6.65%	8.31% 19.4%
0.2111		6	0.97	0.902	0.812	0.9 0.56	0.84	0.0263	0.0645	15.3%	41.8%
1.9699		6	0.7	0.566	0.612	0.56	0.56	0.0457	0.107	26.9%	41.0% 65.4%
1.5055		J	0.417	0.255	0.554	0.23	0.50	0.0457	V.11Z	20.5%	UJ.470

CETIS Summary Report

Report Date:

05 Feb-13 16:57 (p 2 of 2)

Wildlife International

Test Code: 48718015 Wheat | 09-8614-2525

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Height Det	tail						
Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	49	56.2	55.6	55.2	53.6	54.4
0	Negative Control	52.2	57.8	52.6	54	52.6	54.2
0.024		59	55.4	54.6	53.8	52	55.6
0.0721		58.4	49.6	55.2	52	52.8	49
0.2111		52.2	52.2	51	53.6	49.6	49.4
0.6474		36.8	47.2	47	48	45.4	48
1.9699		29.2	41.6	42	38.6	39.4	42.2

Survival Detail

Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	1	1	1	1	1	1
0	Negative Control	1	1	1	1	1	1
0.024		1	1	1	1	1	1
0.0721		1	1	1	1	1	1
0.2111		1	1	1	1	1	1
0.6474		1	1	1	1	1	1
1.9699		1	1	0.8	1	1	1

Weight Detail

Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	1.17	1.15	1.25	1.08	1.28	1.29
0	Negative Control	1.24	1.34	1.23	1.05	1.09	1.12
0.024		1.42	1.19	1.24	1.07	1.11	1.57
0.0721		1.34	1.05	0.96	1.14	1.03	1.1
0.2111		1.02	0.9	0.97	0.92	1.07	0.94
0.6474		0.56	0.76	0.77	0.84	0.66	0.61
1.9699		0.23	0.37	0.48	0.56	0.45	0.41

Report Date:

05 Feb-13 16:56 (p 1 of 7)

Test Code:	48718015 Wheat 09-8614-2525
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OCSPP 850.4	150 Terrestrial Plant	Пег II (Veget	ative Vigor)							Wildlife In	iternational
Analysis ID: Analyzed:	21-3427-2443 05 Feb-13 16:55	Endpoint: Analysis:	Height Nonparametric	-Two Sam	ple			TIS Version icial Result		1.8.7	
Batch ID:	20-8736-6167	Test Type:	Vegetative Vigo	or Tier II			Ana	alyst:			
Start Date:	02 Sep-11	Protocol:	OCSPP 850.41	50 Plant \	/egeta	tive Vig	or Dil i	uent:			
Ending Date:	30 Jan-13 16:39	Species:	Triticum aestivi	ım			Bri	ne:			
Duration:	516d 17h	Source:	Johnny's Selec	ted Seeds	, ME		Age	e:			
Sample ID:	09-3567-4458	Code:	48718015				Cli	ent: CE	MSmith		
Sample Date:	02 Sep-11	Material:	Dicamba (#191	8-00-9)			Pro	oject:			
Receive Date:	: 30 Jan-13 16:39	Source:	BASF Corporat	ion							
Sample Age:	NA	Station:									
Data Transfor				Seed			PMSD	NOEL	LOEL	TOEL	TU
Untransformed	AN E	C > T	NA	NA			6.54%	0.0721	0.2111	0.1234	
Mann-Whitne	y U Two-Sample Test										
Control	vs Group	Test	Stat Critical	Ties I)F P-\	/alue	P-Type	Decision	n(α:5%)		
Negative Conti	rol 0.024	12	NA	0 ′	0 0.8	355	Exact	Non-Sigr	nificant Effec	t	
	0.0721	22	NA	0 ′	0 0.2	814	Exact	Non-Sigr	nificant Effec	t	
	0.2111*	32	NA	1 1	0.0	108	Exact	Significa	nt Effect		
	0.6474*	36	NA	0 ′	0.0	011	Exact	Significa	nt Effect		
	1.9699*	36	NA	0 ′	0.0	011	Exact	Significa	nt Effect		
ANOVA Table	1										
Source	Sum Squares	Mean	Square	DF	F S	Stat	P-Value				
Between	1172.312	234.4	624	5	20.	7	<0.0001	Significa	nt Effect		
Error	340.0734	11.33	578	30							
Total	1512.385			35							
Distributional	Tests										
Attribute	Test		Test Stat	Critical	P-\	/alue	Decisio	n(α:1%)			
Variances	Bartlett Equality	y of Variance	8.24	15.1	0.1	436	Equal Va	ariances			
Distribution	Shapiro-Wilk W	/ Normality	0.912	0.917	0.0	076	Non-nor	mal Distribut	tion		
Height Summ	ary										
Group	Control Type Cou	nt Mean	95% LCL	95% UC	L Me	dian	Min	Max	Std Err	CV%	% Effect
0	Negative Control 6	53.9	51.7	56.1	53.	3	52.2	57.8	0.848	3.85%	0.0%
	6	55.1	52.6	57.5	55		52	59	0.95	4.23%	-2.16%
0.024						4	40	58.4	1.44	6.69%	1.98%
0.024 0.0721	6	52.8	49.1	56.5	52.	4	49	30.7	1.44	0.0370	1.5070
		52.8 51.3	49.1 49.6	56.5 53.1	52. 51.		49 49.4	53.6	0.671	3.2%	4.76%
0.0721	6					6					

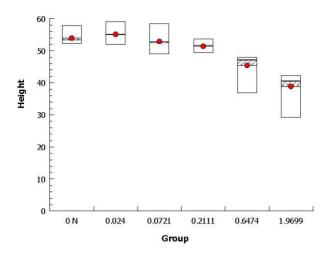
05 Feb-13 16:56 (p 2 of 7)

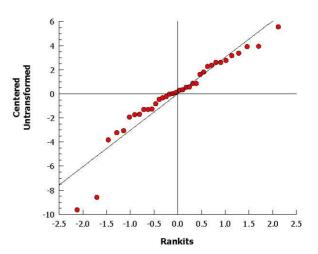
Test Code: 48718015 Wheat | 09-8614-2525

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Wildlife International

Analysis ID:21-3427-2443Endpoint:HeightCETIS Version:CETIS V1.8.7Analyzed:05 Feb-13 16:55Analysis:Nonparametric-Two SampleOfficial Results:Yes





Report Date: 05 Feb-13 16:56 (p 3 of 7)

Test Code:	48718015 Wheat	09-8614-2525
icat Couc.	407 100 15 Willout	00 00 14 2020

								Ies	st Code:	407 100 10	o will out o.	9-8614-252
OCSPP 850.4	4150 Terrestrial	Plant Tie	· II (Vegetati	ve Vigor)							Wildlife In	ternational
Analysis ID:	13-7276-4430	E	ndpoint: H	eight				CE	TIS Version:	CETISv1	.8.7	
Analyzed:	05 Feb-13 16:	56 A	nalysis: N	onparametric-	-Control v	s O	rd. Treatm	ents Off	icial Results	: Yes		
Batch ID:	20-8736-6167	Т	est Type: V	egetative Vigo	or Tier II			An	alyst:			
Start Date:	02 Sep-11	P	rotocol: C	CSPP 850.41	50 Plant	Veg	getative Vig	or Dil	uent:			
Ending Date:	: 30 Jan-13 16:	39 S	pecies: T	riticum aestivu	um			Bri	ne:			
Duration:	516d 17h	S	ource: J	ohnny's Selec	ted Seeds	s, N	⁄ΙΕ	Ag	e:			
Sample ID:	09-3567-4458	C	ode: 4	8718015				Cli	ent: CDI	MSmith		
Sample Date:	e: 02 Sep-11	N	laterial: D	icamba (#191	8-00-9)			Pro	oject:			
Receive Date	e: 30 Jan-13 16:	39 S	ource: B	ASF Corporat	tion							
Sample Age:	: NA	S	tation:									
Data Transfo	orm	Zeta	Alt Hyp	Trials	Seed				NOEL	LOEL	TOEL	TU
Untransforme	ed	NA	C > T	NA	NA				0.0721	0.2111	0.1234	
Jonckheere-	Terpstra Step-D	own Test										
Control	vs Group		Test Sta	at Critical	MSD	DF	P-Value	P-Type	Decision	(α:5%)		
Negative Cont	trol 0.024		12	NA				Exact	Non-Sign	ificant Effec	t	
	0.0721		0.526	1.64			0.2993	Asymp	_	ificant Effec	t	
	0.2111*		2.01	1.64			0.0222	Asymp	Significan			
	0.6474*		4.06	1.64	5 -	-2	<0.0001	Asymp	Significan	t Effect		
	1.9699*		5.43	1.64	5 -	-2	<0.0001	Asymp	Significan	t Effect		
ANOVA Table	е											
	e Sum Sqı	uares	Mean S	quare	DF		F Stat	P-Value	Decision	(α:5%)		
Source			Mean S 234.462		DF		F Stat 20.7	P-Value <0.0001		<u> </u>		
Source Between Error	Sum Sq i 1172.312 340.0734			4	5 30					<u> </u>		
Source Between Error	Sum Sqi 1172.312		234.462	4	5					<u> </u>		
Source Between Error Total	Sum Squ 1172.312 340.0734 1512.385		234.462	4	5 30					<u> </u>		
Source Between Error Total Distributiona Attribute	Sum Squ 1172.312 340.0734 1512.385 al Tests Test		234.462 11.3357	4 8 Test Stat	5 30 35 Critical		20.7 P-Value	<0.0001		<u> </u>		
Source Between Error Total Distributiona Attribute Variances	Sum Squ 1172.312 340.0734 1512.385 al Tests Test Bartlett	Equality of	234.462 11.3357 TVariance	Test Stat 8.24	5 30 35 Critical 15.1		20.7 P-Value 0.1436	<0.0001 Decisio Equal V	Significan n(α:1%) ariances	t Effect		
Source Between Error Total Distributiona Attribute Variances	Sum Squ 1172.312 340.0734 1512.385 al Tests Test Bartlett		234.462 11.3357 TVariance	4 8 Test Stat	5 30 35 Critical		20.7 P-Value	<0.0001 Decisio Equal V	Significan n(α:1%)	t Effect		
Source Between Error Total Distributiona Attribute Variances Distribution	Sum Squ 1172.312 340.0734 1512.385 al Tests Test Bartlett Shapiro	Equality of	234.462 11.3357 TVariance	Test Stat 8.24	5 30 35 Critical 15.1		20.7 P-Value 0.1436	<0.0001 Decisio Equal V	Significan n(α:1%) ariances	t Effect		
Source Between Error Total Distributiona Attribute Variances Distribution Height Summ	Sum Sqi	Equality of Wilk W N	234.462 11.3357 F Variance ormality Mean	Test Stat 8.24 0.912 95% LCL	5 30 35 Critical 15.1 0.917		P-Value 0.1436 0.0076 Median	<0.0001 Decisio Equal V Non-nor	Significan n(α:1%) ariances mal Distributi Max	t Effect on Std Err	CV%	%Effect
Source Between Error Total Distributiona Attribute Variances Distribution Height Summ Group	Sum Squ	Equality of Wilk W N Count	234.462 11.3357 F Variance ormality Mean 53.9	Test Stat 8.24 0.912 95% LCL 51.7	5 30 35 Critical 15.1 0.917 95% UC 56.1		P-Value 0.1436 0.0076 Median 53.3	Oecisio Equal V Non-nor	Significan n(α:1%) ariances mal Distributi Max 57.8	on Std Err 0.848	3.85%	0.0%
Source Between Error Total Distributiona Attribute Variances Distribution Height Summ Group 0 0.024	Sum Sqi	Equality of Wilk W N Count ol 6 6	234.462 11.3357 F Variance ormality Mean 53.9 55.1	Test Stat 8.24 0.912 95% LCL 51.7 52.6	5 30 35 Critical 15.1 0.917 95% UC 56.1 57.5		P-Value 0.1436 0.0076 Median 53.3 55	Vecision Equal Volument Non-norm Min 52.2 52	Significan n(α:1%) ariances mal Distributi Max 57.8 59	on Std Err 0.848 0.95	3.85% 4.23%	0.0% -2.16%
Source Between Error Total Distributiona Attribute Variances Distribution Height Sumn Group 0 0.024 0.0721	Sum Sqi	Equality of Wilk W N Count ol 6 6 6	234.462 11.3357 F Variance ormality Mean 53.9 55.1 52.8	Test Stat 8.24 0.912 95% LCL 51.7 52.6 49.1	5 30 35 Critical 15.1 0.917 95% UC 56.1 57.5 56.5		P-Value 0.1436 0.0076 Median 53.3 55 52.4	Vecision Equal Volument Non-norm Min 52.2 52 49	Significan n(α:1%) ariances mal Distributi Max 57.8 59 58.4	on Std Err 0.848 0.95 1.44	3.85% 4.23% 6.69%	0.0% -2.16% 1.98%
Source Between Error Total Distributiona Attribute Variances Distribution Height Summ Group 0 0.024 0.0721 0.2111	Sum Sqi	Equality of Wilk W N Count ol 6 6 6 6	234.462 11.3357 F Variance ormality Mean 53.9 55.1 52.8 51.3	Test Stat 8.24 0.912 95% LCL 51.7 52.6 49.1 49.6	5 30 35 Critical 15.1 0.917 95% UC 56.1 57.5 56.5 53.1		P-Value 0.1436 0.0076 Median 53.3 55 52.4 51.6	Control	Significan n(α:1%) ariances mal Distributi Max 57.8 59 58.4 53.6	on Std Err 0.848 0.95 1.44 0.671	3.85% 4.23% 6.69% 3.2%	0.0% -2.16% 1.98% 4.76%
ANOVA Table Source Between Error Total Distributiona Attribute Variances Distribution Height Summ Group 0 0.024 0.0721 0.2111 0.6474 1.9699	Sum Sqi	Equality of Wilk W N Count ol 6 6 6	234.462 11.3357 F Variance ormality Mean 53.9 55.1 52.8	Test Stat 8.24 0.912 95% LCL 51.7 52.6 49.1	5 30 35 Critical 15.1 0.917 95% UC 56.1 57.5 56.5	:L	P-Value 0.1436 0.0076 Median 53.3 55 52.4	Vecision Equal Volume Non-norm Min 52.2 52 49	Significan n(α:1%) ariances mal Distributi Max 57.8 59 58.4	on Std Err 0.848 0.95 1.44	3.85% 4.23% 6.69%	0.0% -2.16% 1.98%

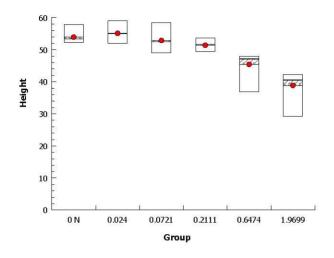
05 Feb-13 16:56 (p 4 of 7) 48718015 Wheat | 09-8614-2525

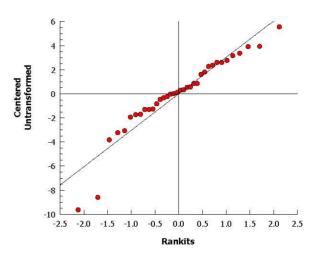
OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Wildlife International

Analysis ID: 13-7276-4430 Endpoint: Height CETIS Version: CETIS v1.8.7

Analyzed: 05 Feb-13 16:56 Analysis: Nonparametric-Control vs Ord. Treatments Official Results: Yes





05 Feb-13 16:56 (p 5 of 7)

 	Test Code:	48718015 Wheat 09-8614-2525

OCSPP 850.4	150 Terrestrial Plar	nt Tier II (Vege	tative Vi	gor)							Wildlife Ir	nternational
Analysis ID: Analyzed:	15-5959-4572 05 Feb-13 16:55	Endpoint Analysis:		al rametric-	Two Sar	nple	·		ETIS Version		.8.7	
Batch ID:	20-8736-6167	Test Type				<u> </u>		Δ	nalyst:			
Start Date:	02 Sep-11	Protocol:	_	_		Ver	getative Vig		iluent:			
Ending Date:	•	Species:		m aestivu			gotativo vig		rine:			
Duration:	516d 17h	Source:		y's Select		s. N	ΛE		ge:			
			•									
Sample ID:	09-3567-4458	Code:	48718							OMSmith		
Sample Date:	•	Material:		ba (#1918	,			Р	roject:			
	: 30 Jan-13 16:39	Source:	BASE	Corporati	ion							
Sample Age:	NA	Station:										
Data Transfor	rm Z	eta Alt	Нур Т	rials	Seed			PMSD	NOEL	LOEL	TOEL	TU
Untransformed	N E	A C>	T N	Α	NA			3.49%	1.9699	>1.9699	NA	
Mann-Whitne	y U Two-Sample Te	est										
Control	vs Group	Test	tStat C	ritical	Ties	DF	P-Value	Р-Туре	Decision	n(α:5%)		
Negati∨e Cont	rol 0.024	18	N	Α	1	10	1.0000	Exact	Non-Sigr	nificant Effect	t	
	0.0721	18	N	Α	1	10	1.0000	Exact	Non-Sigr	nificant Effect	t	
	0.2111	18	N	Α	1	10	1.0000	Exact	Non-Sigr	nificant Effect	t	
	0.6474	18	N	Α	1	10	1.0000	Exact	Non-Sigr	nificant Effect	t	
	1.9699	21	N	Α	1	10	0.5000	Exact	Non-Sigr	nificant Effect	t	
ANOVA Table	,											
Source	Sum Square	s Mea	ın Square	е	DF		F Stat	P-Valu	e Decision	n(α:5%)		
Between	0.005555556	0.00	1111111		5		1	0.4346	Non-Sigr	nificant Effect	İ	
Error	0.03333334	0.00	1111111		30		_					
Total	0.03888889				35							
Distributional	Tests											
Attribute	Test		Т	est Stat	Critical	1	P-Value	Decisi	on(α:1%)			
Variances	Mod Levene	Equality of Va	riance 1		3.7		0.4346	Equal '	√ariances			
Variances	Levene Equa	ality of Varianc	e 6	.25	3.7		0.0004	Unequ	al Variances			
Distribution	Shapiro-Will	W Normality	0	.362	0.917		<0.0001	Non-no	rmal Distribut	tion		
Survival Sum	mary											
_	Control Type C	ount Mea	ın 9:	5% LCL	95% U	CL	Median	Min	Max	Std Err	CV%	% Effect
Group					4		1	1	1	0	0.00/	0.00/
0	Negative Control 6		1		1						0.0%	0.0%
•			1 1		1		1	1	1	0	0.0%	0.0%
0	Negative Control 6	1										
0 0.024	Negative Control 6 6 6 6	1 1 1	1		1 1 1		1	1 1 1	1	0 0 0	0.0%	0.0%
0 0.024 0.0721	Negative Control 6 6	1 1 1 1	1 1 1 1	.881	1 1		1 1	1 1	1 1	0 0	0.0% 0.0%	0.0% 0.0%

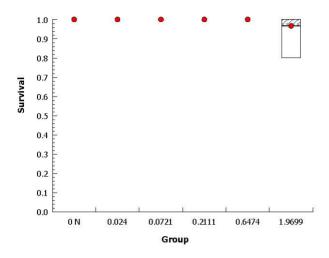
05 Feb-13 16:56 (p 6 of 7)

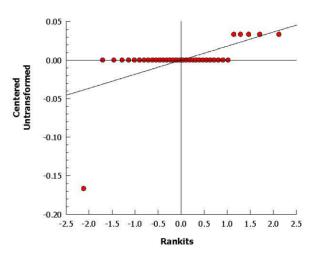
Test Code: 48718015 Wheat | 09-8614-2525

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Wildlife International

Analysis ID:15-5959-4572Endpoint:SurvivalCETIS Version:CETISv1.8.7Analyzed:05 Feb-13 16:55Analysis:Nonparametric-Two SampleOfficial Results:Yes





05 Feb-13 16:56 (p 7 of 7)

Test Code: 48718015 Wheat | 09-8614-2525

000000000										
OCSPP 850.4	150 Terrestrial Plant	Пег II (Vegeta	ative Vigor)						Wildlife In	ternational
Analysis ID:	18-8679-3747	Endpoint:	Survival			CET	1S Version	: CETISv1	.8.7	
Analyzed:	05 Feb-13 16:56	Analysis:	Nonparametric	-Control vs C	Ord. Treatm	ents Offi	cial Results	s: Yes		
Batch ID:	20-8736-6167	Test Type:	Vegetative Vig	or Tier II		Ana	lyst:			
Start Date:	02 Sep-11	Protocol:	OCSPP 850.4		getative Vig					
Ending Date:	30 Jan-13 16:39	Species:	Triticum aestiv	um		Brin	e:			
Duration:	516d 17h	Source:	Johnny's Selec	ted Seeds, N	ME	Age	:			
Sample ID:	09-3567-4458	Code:	48718015			Clie	nt: CD	MSmith		
Sample Date:		Material:	Dicamba (#191	18-00-9)		Proj	ect:			
Receive Date:	: 30 Jan-13 16:39	Source:	BASF Corpora	tion						
Sample Age:	NA	Station:								
Data Transfor	m Zeta	a Alt H	yp Trials	Seed			NOEL	LOEL	TOEL	TU
Untransformed	AN NA	C > T	NA	NA			0.6474	1.9699	1.129	
Jonckheere-T	erpstra Step-Down To	est								
Control	vs Group	Test	Stat Critical	Ties DF	P-Value	P-Type	Decision	η(α:5%)		
Negative Cont	rol 0.024	0	1.64	1 -2	1.0000	Asymp	Non-Sign	rificant Effec	t	
	0.0721	0	1.64		1.0000	Asymp	_	nificant Effec		
	0.2111	0	1.64	1 -2	1.0000	Asymp		rificant Effec		
	0.6474	0	1.64		1.0000	Asymp	_	rificant Effec	t	
	1.9699*	1.85	1.64	1 -2	0.0324	Asymp	Significa	nt Effect		
ANOVA Table										
Source	Sum Squares		Square	DF	F Stat	P-Value	Decision	<u> </u>		
Between -	0.005555556	0.001	111111	5	1	0.4346	Non-Sign	nificant Effec	t	
Error										
-	0.03333334		111111	30	_					
Total	0.03333334		111111	30 35	_					
-	0.03888889		111111		_					
Total Distributional Attribute	0.03888889 Tests Test	0.001	Test Stat	35 Critical	P-Value	Decision	· · ·			
Total Distributional	0.03888889 Tests	0.001	Test Stat	35 Critical 3.7	P-Value 0.4346	D ecision Equal Va	· · ·			
Total Distributional Attribute	0.03888889 Tests Test Mod Levene Edualit	0.001 quality of Vari y of Variance	Test Stat ance 1 6.25	35 Critical 3.7 3.7	0.4346 0.0004	Equal Va Unequal '	riances Variances			
Total Distributional Attribute Variances	0.03888889 Tests Test Mod Levene Ed	0.001 quality of Vari y of Variance	Test Stat	35 Critical 3.7	0.4346	Equal Va Unequal '	riances	ion		
Total Distributional Attribute Variances Variances	0.03888889 Tests Test Mod Levene Edulit Levene Equalit Shapiro-Wilk W	0.001 quality of Vari y of Variance	Test Stat ance 1 6.25	35 Critical 3.7 3.7	0.4346 0.0004	Equal Va Unequal '	riances Variances	ion		
Total Distributional Attribute Variances Variances Distribution Survival Summ	0.03888889 Tests Test Mod Levene Equalit Shapiro-Wilk W mary Control Type Cou	0.001 quality of Varia y of Variance / Normality	Test Stat ance 1 6.25 0.362 95% LCL	35 Critical 3.7 3.7 0.917	0.4346 0.0004 <0.0001 Median	Equal Va Unequal ' Non-norm	riances Variances nal Distribut Max	Std Err	cv%	% Effect
Total Distributional Attribute Variances Variances Distribution Survival Summ Group 0	0.03888889 Tests Test Mod Levene Edulit Shapiro-Wilk W mary Control Type Cou	0.001 quality of Variance / Normality unt Mean	Test Stat ance 1 6.25 0.362 95% LCL	35 Critical 3.7 3.7 0.917 95% UCL	0.4346 0.0004 <0.0001 Median	Equal Va Unequal V Non-norm	riances Variances nal Distribut Max	Std Err	0.0%	0.0%
Total Distributional Attribute Variances Variances Distribution Survival Summ Group 0 0.024	0.03888889 Tests Test Mod Levene Edulit Shapiro-Wilk W mary Control Type Cou Negative Control 6 6	quality of Variance / Normality int Mean 1	Test Stat ance 1 6.25 0.362 95% LCL 1 1	35 Critical 3.7 3.7 0.917 95% UCL 1 1	0.4346 0.0004 <0.0001 Median 1	Equal Va Unequal Non-norm	riances Variances nal Distribut Max 1	Std Err 0 0	0.0% 0.0%	0.0% 0.0%
Total Distributional Attribute Variances Variances Distribution Survival Summary Group 0 0.024 0.0721	0.03888889 Tests Mod Levene Edulit Shapiro-Wilk W mary Control Type Cou Negative Control 6 6 6 6	quality of Varia y of Variance / Normality int Mean 1 1	Test Stat ance 1 6.25 0.362 95% LCL 1 1 1	35 Critical 3.7 3.7 0.917 95% UCL 1 1 1	0.4346 0.0004 <0.0001 Median 1 1	Equal Va Unequal Non-norm Min 1 1	riances Variances nal Distribut Max 1 1 1	Std Err 0 0	0.0% 0.0% 0.0%	0.0% 0.0% 0.0%
Total Distributional Attribute Variances Variances Distribution Survival Sumi Group 0 0.024 0.0721 0.2111	0.03888889 Tests Mod Levene Edulit Shapiro-Wilk W mary Control Type Cou Negative Control 6 6 6 6 6	quality of Variance / Normality int Mean 1 1 1 1	Test Stat ance 1 6.25 0.362 95% LCL 1 1 1 1	35 Critical 3.7 3.7 0.917 95% UCL 1 1 1 1	0.4346 0.0004 <0.0001 Median 1 1 1	Equal Va Unequal Non-norm Min 1 1 1 1	riances Variances nal Distribut Max 1 1 1 1	Std Err 0 0 0 0	0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0%
Total Distributional Attribute Variances Variances Distribution Survival Summary Group 0 0.024 0.0721	0.03888889 Tests Mod Levene Edulit Shapiro-Wilk W mary Control Type Cou Negative Control 6 6 6 6	quality of Varia y of Variance / Normality int Mean 1 1	Test Stat ance 1 6.25 0.362 95% LCL 1 1 1 1 1 1	35 Critical 3.7 3.7 0.917 95% UCL 1 1 1	0.4346 0.0004 <0.0001 Median 1 1	Equal Va Unequal Non-norm Min 1 1	riances Variances nal Distribut Max 1 1 1	Std Err 0 0	0.0% 0.0% 0.0%	0.0% 0.0% 0.0%

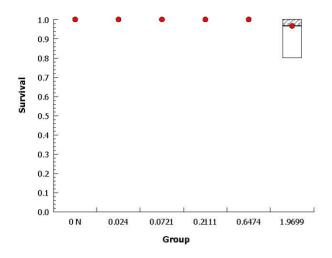
05 Feb-13 16:56 (p 8 of 7)

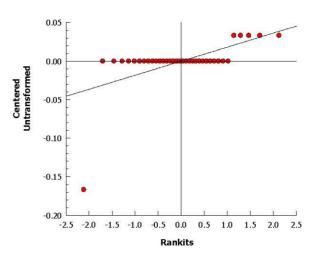
Test Code: 48718015 Wheat | 09-8614-2525

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Wildlife International

Analysis ID:	18-8679-3747	Endpoint:	Survival	CETIS Version:	CETISv1.8.7
Analyzed:	05 Feb-13 16:56	Analysis:	Nonnarametric-Control vs Ord Treatments	Official Resulte:	Vec





Report Date: 05 Feb-13 16:56 (p 9 of 7)

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Test Code:	48718015 Wheat	09-8614	2525

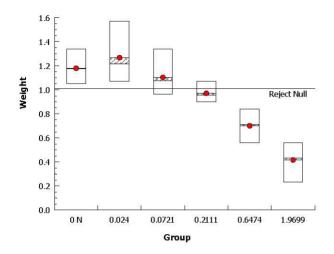
							163	Coue.	407 100 1	o vviileat O	3-0014-232
OCSPP 850.4	150 Terrestrial I	Plant T	ier II (Vegeta	ative Vigor)						Wildlife In	ternational
Analysis ID:	14-2369-4857		Endpoint:	Weight			CET	'IS Version	: CETISv	1.8.7	
Analyzed:	05 Feb-13 16:	55	Analysis:	Parametric-Co	ntrol vs Tre	atments	Offi	cial Result	s: Yes		
Batch ID:	20-8736-6167		Test Type:	Vegetati∨e Vig	or Tier II		Ana	lyst:			
Start Date:	02 Sep-11		Protocol:	OCSPP 850.4		egetative Vid		•			
Ending Date:	30 Jan-13 16:3	9	Species:	Triticum aestiv	rum		Brin	e:			
Duration:	516d 17h		Source:	Johnny's Selec	cted Seeds,	ME	Age	:			
Sample ID:	09-3567-4458		Code:	48718015			Clie	nt: CD	MSmith		
Sample Date:	02 Sep-11		Material:	Dicamba (#19	18-00-9)		Proj	ect:			
Receive Date:	: 30 Jan-13 16:3	9	Source:	BASF Corpora	tion		_				
Sample Age:			Station:	·							
Data Transfor	·m	Zeta	Alt H	yp Trials	Seed		PMSD	NOEL	LOEL	TOEL	TU
Untransformed	d	NA	C > T	NA	NA		14.4%	0.0721	0.2111	0.1234	
Dunnett Multi	ple Comparisor	n Test									
Control	vs Group		Test \$	Stat Critical	MSD D	F P-Value	P-Type	Decision	η(α:5%)		
Negati∨e Cont	rol 0.024		-1.22	2.34	0.169 1	0.9914	CDF	Non-Sigr	nificant Effec	t	
	0.0721		1.03	2.34	0.169 10	0.4032	CDF	Non-Sigr	nificant Effec	t	
	0.2111*		2.87	2.34	0.169 10	0.0152	CDF	Significa	nt Effect		
	0.6474*		6.6	2.34	0.169 10	0.0001	CDF	Significa	nt Effect		
	1.9699*		10.5	2.34	0.169 10	0.0001	CDF	Significa	nt Effect		
ANOVA Table	ı										
Source	Sum Squ	ares	Mean	Square	DF	F Stat	P-Value	Decision	η(α:5%)		
Between	3.135392		0.627	0784	5	39.8	<0.0001	Significa	nt Effect		
Error	0.472683	4	0.015	75611	30						
Total	3.608075				35						
Distributional	Tests										
Attribute	Test			Test Stat	Critical	P-Value	Decision	(α:1%)			
Variances	Bartlett E	quality	of Variance	5.56	15.1	0.3512	Equal Va	riances			
Distribution	Shapiro-	Nilk W	Normality	0.972	0.917	0.4932	Normal D	istribution			
Weight Sumn	nary										
weight Summ				050/ 1.01	95% UCL	. Median	Min	Мах	Std Err	CV%	% Effect
Group	Control Type	Cou		95% LCL							
Group	Control Type Negative Contro	ol 6	1.18	1.06	1.29	1.17	1.05	1.34	0.0448	9.32%	0.0%
Group 0 0.024		ol 6 6	1.18 1.27		1.29 1.47	1.17 1.22	1.07	1.57	0.0786	15.2%	-7.5%
Group 0 0.024		ol 6	1.18	1.06	1.29	1.17					
Group 0 0.024 0.0721		6 6 6	1.18 1.27 1.1 0.97	1.06 1.06	1.29 1.47	1.17 1.22 1.08 0.955	1.07	1.57	0.0786	15.2%	-7.5% 6.36% 17.7%
Group 0 0.024 0.0721 0.2111 0.6474		ol 6 6 6	1.18 1.27 1.1	1.06 1.06 0.966	1.29 1.47 1.24	1.17 1.22 1.08	1.07 0.96	1.57 1.34	0.0786 0.0536	15.2% 11.9%	-7.5% 6.36%

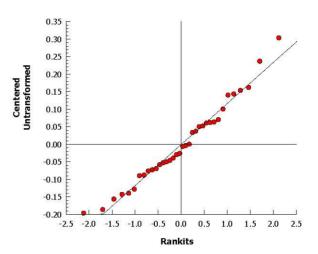
05 Feb-13 16:56 (p 10 of 7) 48718015 Wheat | 09-8614-2525

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Wildlife International

Analysis ID:14-2369-4857Endpoint:WeightCETIS Version:CETIS V1.8.7Analyzed:05 Feb-13 16:55Analysis:Parametric-Control vs TreatmentsOfficial Results:Yes





Report Date: Test Code: 05 Feb-13 16:56 (p 11 of 7) 48718015 Wheat | 09-8614-2525

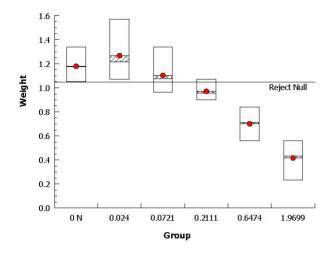
							lest				
OCSPP 850.4	4150 Terrestria	l Plant Tie	r II (Vegetativ	ve Vigor)						Wildlife In	ternationa
Analysis ID:	20-1082-103 05 Feb-13 16		ndpoint: W	-	tral va Ord	Fractmanta		IS Version:		.8.7	
Analyzed:	05 Feb-13 10	0.00 A	nalysis: P	arametric-Con	tioi vs Oiu.	realments	Ollic	ial Results	s. res		
Batch ID:	20-8736-616	7 T		egetative Vigo			Anal	yst:			
Start Date:	02 Sep-11	P	rotocol: O	CSPP 850.41	50 Plant Ve	getati∨e Vig					
Ending Date:	: 30 Jan-13 16	:39 S	pecies: Ti	iticum aesti∨u	ım		Brin	e:			
Duration:	516d 17h	S	Source: Jo	ohnny's Select	ed Seeds, N	ΛE	Age:				
Sample ID:	09-3567-445	в с	ode: 48	3718015			Clier	nt: CD	MSmith		
Sample Date:	: 02 Sep-11	IV	laterial: D	icamba (#191	8-00-9)		Proj	ect:			
Receive Date	e: 30 Jan-13 16	:39 S	ource: B	ASF Corporat	ion						
Sample Age:	NA	S	tation:								
Data Transfo	rm	Zeta	Alt Hyp	Trials	Seed		PMSD	NOEL	LOEL	TOEL	TU
Untransforme	ed	NA	C > T	NA	NA		11.2%	0.0721	0.2111	0.1234	
Williams Mul	Itiple Comparis	on Test									
Control	vs Group		Test Sta	t Critical	MSD DF	P-Value	P-Type	Decision	(a:5%)		
Negative Cont	trol 0.024		-1.22	1.7	0.123 10	>0.05	CDF	Non-Sign	ificant Effec	t	
	0.0721		1.03	1.78	0.129 10	>0.05	CDF	Non-Sign	ificant Effec	t	
	0.2111	*	2.87	1.8	0.131 10	<0.05	CDF	Significar	nt Effect		
	0.6474	*	6.6	1.81	0.131 10	<0.05	CDF	Significar	nt Effect		
	1.9699	*	10.5	1.82	0.132 10	<0.05	CDF	Significar	nt Effect		
ANOVA Table	e										
Source	Sum So	uares	Mean So	quare	DF	F Stat	P-Value	Decision	(α:5%)		
Between	3.13539	2	0.627078	B 4	5	39.8	<0.0001	Significar	nt Effect		
Error	0.47268	34	0.015750	611	30	_					
Total	3.60807	5			0.5						
		J			35						
Distributiona	al Tests				35						
	al Tests Test	<u> </u>		Test Stat	Critical	P-Value	Decision	(α:1%)			
Attribute	Test	Equality o	f Variance	Test Stat 5.56		P-Value 0.3512	Decision Equal Var	· ·			
Attribute Variances	Test Bartlett				Critical			iances			
Attribute Variances Distribution	Test Bartlett Shapiro	Equality o		5.56	Critical 15.1	0.3512	Equal Var	iances			
Attribute Variances Distribution Weight Sumr Group	Test Bartlett Shapiro	Equality o ≻Wilk W N		5.56	Critical 15.1 0.917	0.3512 0.4932 Median	Equal Var Normal D	iances	Std Err	cv%	% Effect
Attribute Variances Distribution Weight Sumr Group	Test Bartlett Shapiro	Equality or by Wilk W N Count trol 6	ormality Mean 1.18	5.56 0.972 95% LCL 1.06	Critical 15.1 0.917 95% UCL 1.29	0.3512 0.4932 Median 1.17	Equal Var Normal D Min 1.05	iances istribution Max 1.34	0.0448	9.32%	0.0%
Attribute Variances Distribution Weight Sumr Group 0 0.024	Test Bartlett Shapiro mary Control Type	Equality or p-Wilk W N Count trol 6 6	Mean 1.18 1.27	5.56 0.972 95% LCL 1.06 1.06	Critical 15.1 0.917 95% UCL 1.29 1.47	0.3512 0.4932 Median 1.17 1.22	Equal Var Normal D Min 1.05 1.07	Max 1.34 1.57	0.0448 0.0786	9.32% 15.2%	0.0% -7.5%
Attribute Variances Distribution Weight Sumr Group 0 0.024 0.0721	Test Bartlett Shapiro mary Control Type	Equality of Section 1. Equality of Section 1. Equality of Section 1. Equality	Mean 1.18 1.27 1.1	5.56 0.972 95% LCL 1.06 1.06 0.966	Critical 15.1 0.917 95% UCL 1.29 1.47 1.24	0.3512 0.4932 Median 1.17 1.22 1.08	Min 1.05 1.07 0.96	Max 1.34 1.57 1.34	0.0448 0.0786 0.0536	9.32% 15.2% 11.9%	0.0% -7.5% 6.36%
Attribute Variances Distribution Weight Sumr Group 0 0.024 0.0721 0.2111	Test Bartlett Shapiro mary Control Type	Equality of the count of the co	Mean 1.18 1.27 1.1 0.97	5.56 0.972 95% LCL 1.06 1.06 0.966 0.902	Critical 15.1 0.917 95% UCL 1.29 1.47 1.24 1.04	0.3512 0.4932 Median 1.17 1.22 1.08 0.955	Equal Var Normal D Min 1.05 1.07 0.96 0.9	Max 1.34 1.57 1.34 1.07	0.0448 0.0786 0.0536 0.0263	9.32% 15.2% 11.9% 6.65%	0.0% -7.5% 6.36% 17.7%
Distributiona Attribute Variances Distribution Weight Sumr Group 0 0.024 0.0721 0.2111 0.6474 1.9699	Test Bartlett Shapiro mary Control Type	Equality of Section 1. Equality of Section 1. Equality of Section 1. Equality	Mean 1.18 1.27 1.1	5.56 0.972 95% LCL 1.06 1.06 0.966	Critical 15.1 0.917 95% UCL 1.29 1.47 1.24	0.3512 0.4932 Median 1.17 1.22 1.08	Min 1.05 1.07 0.96	Max 1.34 1.57 1.34	0.0448 0.0786 0.0536	9.32% 15.2% 11.9%	0.0% -7.5% 6.36%

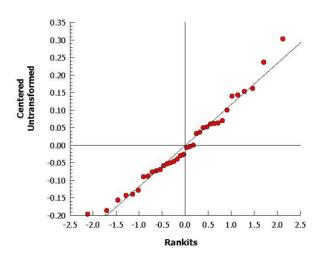
05 Feb-13 16:56 (p 12 of 7) 48718015 Wheat | 09-8614-2525

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

Wildlife International

Analysis ID:	20-1082-1034	Endpoint:	Weight	CETIS Version:	CETISv1.8.7	
Analyzed:	05 Feb-13 16:56	Analysis:	Parametric-Control vs Ord Treatments	Official Results:	Yes	





05 Feb-13 16:57 (p 1 of 4)

	Test Code:	48718015 Wheat 09-8614-2525
OCCOD 950 4450 Terrestrial Plant Ter II (Vegetative Vigor)		Wildlife International

OCSPP 850.4	150 Terrestriai Piant	Her II (Veget	ative vigor)		vviidilte international
Analysis ID:	15-3168-1190	Endpoint:	Height	CETIS Version:	CETISv1.8.7
Analyzed:	05 Feb-13 16:55	Analysis:	Nonlinear Regression	Official Results:	Yes
Batch ID:	20-8736-6167	Test Type:	Vegetative Vigor Tier II	Analyst:	
Start Date:	02 Sep-11	Protocol:	OCSPP 850.4150 Plant Vegetative Vigor	Diluent:	
Ending Date:	30 Jan-13 16:39	Species:	Triticum aestivum	Brine:	
Duration:	516d 17h	Source:	Johnny's Selected Seeds, ME	Age:	
Sample ID: Sample Date: Receive Date:	30 Jan-13 16:39	Code: Material: Source: Station:	48718015 Dicamba (#1918-00-9) BASF Corporation	Client: CDM: Project:	Smith

Non-Linear Regression Options

Model Function	X Transform	Y Transform	Weighting Function	PTBS Function
3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]	None	None	Poisson [W=1/Y]	Off [Y*=Y]

Regression Summary

Iters	Log LL	AICc	BIC	Adj R2	Optimize	F Stat	Critical	P-Value	Decision(α:5%)
7	5190	-10400	-10400	0.7294	Yes	0.328	2.92	0.8052	Non-Significant Lack of Fit

Point Estimates

Level		95% LCL	95% UCL
IC5	0.14	0.0521	0.25
IC10	0.335	0.192	0.515
IC25	1.44	1.1	1.85
IC50	7.29	3.61	14.7

Regression Parameters

Parameter	Estimate	Std Error	95% LCL	95% UCL	t Stat	P-Value	Decision(α:5%)
Α	54.6	1.13	52.4	56.8	48.3	<0.0001	Significant Parameter
С	2.4	0.503	1.42	3.39	4.78	<0.0001	Significant Parameter
D	7.29	2.4	2.57	12	3.03	0.0047	Significant Parameter

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Model	22.73021	22.73021	1	96.3	<0.0001	Significant
Lack of Fit	0.247187	0.082396	3	0.328	0.8052	Non-Significant
Pure Error	7.538177	0.251273	30			
Residual	7.785363	0.235920	33			

Residual Analysis

Attribute	Method	Test Stat	Critical	P-Value	Decision(α:5%)
Goodness-of-Fit	Pearson Chi-Sq GOF	7.79	47.4	1.0000	Non-Significant Heterogenity
	Likelihood Ratio GOF	8.09	47.4	1.0000	Non-Significant Heterogenity
Variances	Mod Levene Equality of Variance	0.583	2.53	0.7130	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.885	0.94	0.0014	Non-normal Distribution
	Anderson-Darling A2 Normality	1.1	2.49	0.0070	Non-normal Distribution

Height Su	ımmary		Calculated Variate							
Group	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect	
0	Negative Control	6	53.9	52.2	57.8	0.848	2.08	3.85%	0.0%	
0.024		6	55.1	52	59	0.95	2.33	4.23%	-2.16%	
0.0721		6	52.8	49	58.4	1.44	3.53	6.69%	1.98%	
0.2111		6	51.3	49.4	53.6	0.671	1.64	3.2%	4.76%	
0.6474		6	45.4	36.8	48	1.76	4.32	9.51%	15.8%	
1.9699		6	38.8	29.2	42.2	2.02	4.94	12.7%	28.0%	

05 Feb-13 16:57 (p 2 of 4) 48718015 Wheat | 09-8614-2525

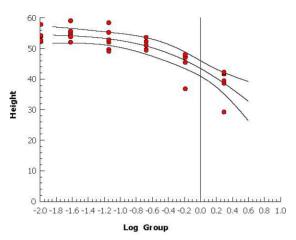
OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor)

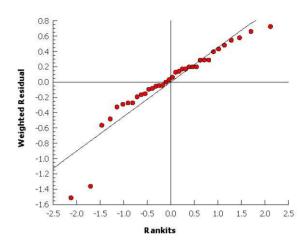
Wildlife International

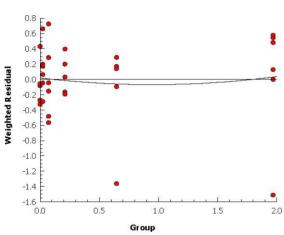
Analysis ID:15-3168-1190Endpoint:HeightCETIS Version:CETIS V1.8.7Analyzed:05 Feb-13 16:55Analysis:Nonlinear RegressionOfficial Results:Yes

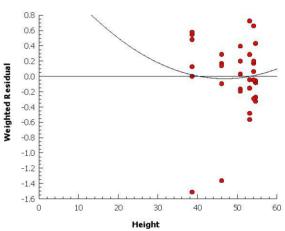
Graphics

3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]









05 Feb-13 16:57 (p 3 of 4)

			Test Code:	48718015 Wheat 09-8614-2525
OCSPP 850.4	150 Terrestrial Plant	Tier II (Vegetative Vigor)		Wildlife International
Analysis ID:	18-8985-4468	Endpoint: Weight	CETIS Version:	CETISv1.8.7
Analyzed:	05 Feb-13 16:55	Analysis: Nonlinear Regression	Official Results:	Yes

Batch ID: 20-8736-6167 Test Type: Vegetative Vigor Tier II Analyst: Start Date: 02 Sep-11 Protocol: OCSPP 850.4150 Plant Vegetative Vigor Diluent: Ending Date: 30 Jan-13 16:39 Species: Triticum aestivum Brine: **Duration:** 516d 17h Source: Johnny's Selected Seeds, ME Age:

 Sample ID:
 09-3567-4458
 Code:
 48718015
 Client:
 CDMSmith

Sample Date: 02 Sep-11 Material: Dicamba (#1918-00-9) Project:

Receive Date: 30 Jan-13 16:39 Source: BASF Corporation

Sample Age: NA Station:

Non-Linear Regression Options

Model Function	X Transform	Y Transform	Weighting Function	PTBS Function
3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]	None	None	Poisson [W=1/Y]	Off [Y*=Y]

Regression Summary

Iters	Log LL	AICc	BIC	Adj R2	Optimize	F Stat	Critical	P-Value	Decision(α:5%)
7	-34.1	74.9	78.9	0.8418	Yes	0.824	2.92	0.4910	Non-Significant Lack of Fit

Point Estimates

Level		95% LCL	95% UCL
IC5	0.047	0.00467	0.089
IC10	0.0906	0.0459	0.143
IC25	0.272	0.191	0.372
IC50	0.922	0.756	1.12

Regression Parameters

Parameter	Estimate	Std Error	95% LCL	95% UCL	t Stat	P-Value	Decision(α:5%)
Α	1.22	0.0464	1.13	1.31	26.4	<0.0001	Significant Parameter
С	1.81	0.246	1.33	2.29	7.37	<0.0001	Significant Parameter
D	0.922	0.134	0.66	1.18	6.89	<0.0001	Significant Parameter

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Model	3.268605	3.268605	1	188	<0.0001	Significant
Lack of Fit	0.043634	0.014545	3	0.824	0.4910	Non-Significant
Pure Error	0.529545	0.017652	30			
Residual	0.573179	0.017369	33			

Residual Analysis

Attribute	Method	Test Stat	Critical	P-Value	Decision(α:5%)
Goodness-of-Fit	Pearson Chi-Sq GOF	0.573	47.4	1.0000	Non-Significant Heterogenity
	Likelihood Ratio GOF	0.573	47.4	1.0000	Non-Significant Heterogenity
Variances	Bartlett Equality of Variance	5.48	11.1	0.3597	Equal Variances
	Mod Levene Equality of Variance	0.839	2.53	0.5330	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.979	0.94	0.7164	Normal Distribution
	Anderson-Darling A2 Normality	0.337	2.49	0.5092	Normal Distribution

Weight Summary				Calculated Variate						
Group	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	% Effect	
0	Negative Control	6	1.18	1.05	1.34	0.0448	0.11	9.32%	0.0%	
0.024		6	1.27	1.07	1.57	0.0786	0.193	15.2%	-7.5%	
0.0721		6	1.1	0.96	1.34	0.0536	0.131	11.9%	6.36%	
0.2111		6	0.97	0.9	1.07	0.0263	0.0645	6.65%	17.7%	
0.6474		6	0.7	0.56	0.84	0.0437	0.107	15.3%	40.6%	
1.9699		6	0.417	0.23	0.56	0.0457	0.112	26.9%	64.6%	

05 Feb-13 16:57 (p 4 of 4) 48718015 Wheat | 09-8614-2525

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) Wildlife International

Analysis ID:18-8985-4468Endpoint:WeightCETIS Version:CETIS V1.8.7Analyzed:05 Feb-13 16:55Analysis:Nonlinear RegressionOfficial Results:Yes

Graphics

3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]

